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ABSTRACT

Educators increasingly realize that longer life expectancies and changing demographics require literacy about the why's and how's of aging across the lifespan. While other contemporary issues are routinely addressed in schools, aging-related issues are often ignored or presented in stereotypical ways. This reference book suggests practical ways to prepare young people for long lives in an aging society; serves as a content outline for developers of curriculum and instructional materials; and shows how to avoid common implementation pitfalls with instruction about aging. Following the "Foreword" (Robert N. Butler), there are five chapters: (1) "Why Education for Longer Life?"; (2) "What Content Should Be Included?"; (3) "How Should Content on Aging Be Presented?"; and (4) "Who Is Supporting Education for Longer Life?" Contains an extensive list of references, organized by chapters. There are five appendices which contain: a glossary of common terms related to aging; general learning objectives about aging; sample classroom activities for elementary and secondary levels; additional references; and questions for reflection and discussion. (BT)

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Learning for Longer Life: A Guide to Aging Education for Developers of K-12 Curriculum and Instructional Materials.

Donna P. Couper
Fran Pratt

National Academy for Teaching and
Learning about Aging, Denton, TX.

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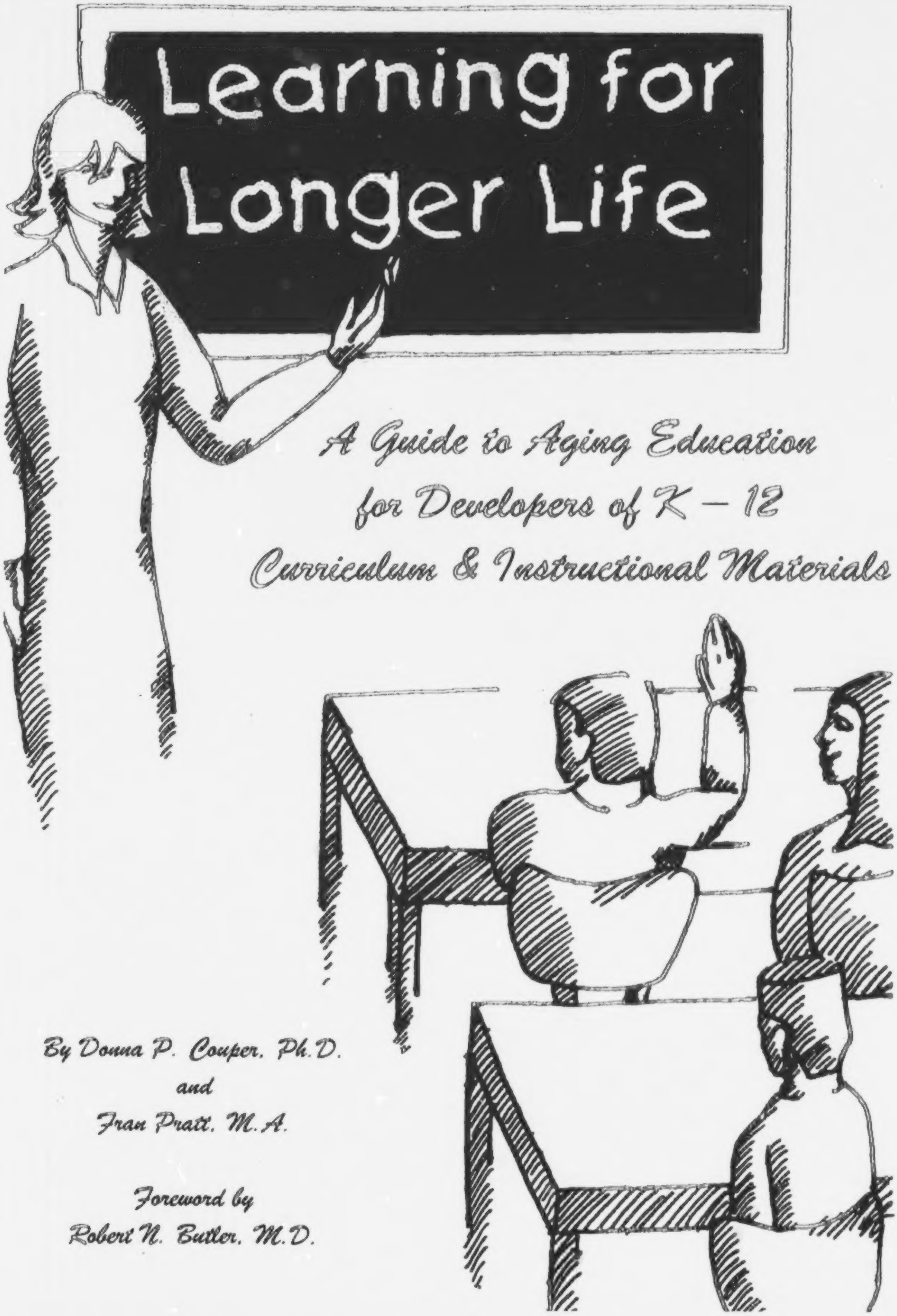

Learning for Longer Life

A Guide to Aging Education for Developers of K – 12 Curriculum & Instructional Materials

By Donna P. Couper, Ph.D.
and
Fran Pratt, M.A.

Foreword by
Robert N. Butler, M.D.

Learning for Longer Life

A Guide to Aging Education for Developers of K–12 Curriculum & Instructional Materials

For
Educators, Gerontologists, and
Developers of K-12 Curriculum and Instructional
Materials

by
Donna Couper and Fran Pratt

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Foreword

If we are to become a society that values its older citizens, we must teach our children by instruction and by example, for nowhere do we find a greater potential for change than in education. If we teach children that growing old is a natural part of life, and raise them to appreciate and value the contributions of older people to their world, ageist stereotypes and fears of growing old will become obsolete.

Our children will inherit the gains that have been made in the field of longevity over the past fifty years. It is our responsibility to equip them with the tools with which to benefit from the many years of healthy and productive living they will have beyond the age of 65. How they respond will depend in large measure on the way our schools teach them about aging.

Robert N. Butler, M.D.
Professor of Geriatrics
The Mount Sinai School of Medicine
President and CEO
International Longevity Center

About the Authors

Donna Couper, Ph.D., has been a consultant on lifespan aging-related issues for education, corporate, health care, and social service organizations since the late 1980s. She was principal investigator of AARP's study, *Children's Images of Aging* (1995); and authored *Aging and Our Families* (1989). She developed secondary curricula in a series titled *Schools in an Aging Society* (1992), and is former executive director of the Center for Understanding Aging, now known as the National Academy for Teaching and Learning about Aging. She and her husband Fred Couper live in West Hartford, Connecticut.

Fran Pratt, M.A., is the founder and former executive director of the Center for Understanding Aging, beginning in the late 1970s. He is author of *Education for Aging: A Teacher's Sourcebook* (1980), and co-author of *Social Security in the USA: A Discussion Guide to Social Insurance with Lessons Plans* (1989); and co-investigator of *Aging-Related Content in High School Textbooks* (1992). He co-authored with Donna Couper the call to action *Teaching about Aging* (1999), for the National Academy for Teaching and Learning about Aging and the National Retired Teachers Association, a division of AARP. The field of K-12 aging education is indebted to his ground-breaking work. He and his wife Jan Pratt live in upstate Maine.

Preface

Children in elementary and secondary classrooms today have the potential of living longer than any previous generation. Barring some catastrophic development, it is possible that large proportions of these students will live into their eighties, nineties, or beyond. All around them will be people who will also be living longer. Population aging will affect virtually every aspect of society, including families, businesses, and government. Will these older adults of tomorrow be capable of taking advantage of their unique opportunity for long life? As family members, voters, and citizens of the community, how well will they deal with the challenges posed by the graying of the population? The answers will depend heavily on whether, when, and to what extent the educational community responds to the critical need for education about aging.

While education serves many purposes, one key objective is to prepare people for what lies ahead. Education not only gets people ready for what may happen in the future, it also creates their potential for shaping the future and making it what they want it to be. On an individual level, the person with the broadest knowledge base and most developed skills is likely to be at the head of the line for career of choice. On a broader level, the society whose people are well educated is able to offer everyone a high quality of life. This is why the cost of building and maintaining schools is typically the highest budget outlay for cities and towns. This is why parents scrimp and save for years to put their children through college. The assumption of parents and society is that "getting ahead in life" depends on education.

When educators lose sight of the future, they lose sight of their mission. In a constantly changing world, it is never possible to know exactly what lies ahead. However, it is possible to look at ongoing developments, make plausible estimates of what the future holds, and plan accordingly. Leaders of business and government do this all the time. So do educators. Preparation for the future means that education must be continuously in the process of reform.

Often, a significant lag exists between the emergence of a situation and general recognition of its relevance to education, especially if the situation develops gradually over time. Such is the case with education about aging. In spite of the fact that growing longevity and issues of population aging are constantly in the public eye, the topic of aging has so far received only scattered attention in schools and colleges. Over the past 25 years, teachers across the country have experimented with aging education in settings that range from primary grades to graduate school. Yet, most young people still reach adulthood with little preparation for their own aging. Nor do they recognize the enormous implications of population aging as the longevity revolution of the twentieth century spills over into the twenty-first.

This situation will not continue. First, whatever is important to society eventually finds its way into the classroom. Just as issues of environment, race, ethnicity, and gender have been embraced by educators in recent decades, aging must be recognized as a relevant topic. Second, there is an aging education movement that is gaining momentum and will ultimately prevail.

This manual documents the need for education about aging-related issues, shows shortcomings in current curriculum and educational materials, and suggests practical ways to make improvements. It serves as a content outline for developers of curriculum and instructional materials, and as an information resource for teachers. It will help educators convey accurate information about aging to their students and avoid many implementation pitfalls associated with instruction about aging-related topics. It is intended to contribute to ongoing public discussion across the nation as to how best to prepare youth for our changing and aging world.

The primary audience of this publication is educators and developers of curriculum and instructional materials. In addition, gerontology faculty and professionals who are primarily advocates for older people can use this resource to connect their programs with those in local school districts and colleges of education. Similarly, retired educators and leaders in communities who are committed to quality lives for people of all ages can use this resource as a rationale and guide to promote change in local school districts and state education agencies.

The fundamental premise behind NATLA's mission is that aging is a lifelong experience, and that education about aging is important for everyone, not just for people who are older or for those who pursue careers in gerontology and elder services. We believe that people of all ages need to learn about aging. This need is especially important for young people with the prospect of long life before them. Our purpose is to promote education for long life, not to fault educators or the publishing industry for shortcomings that stem from pervasive cultural misconceptions and previous lack of scientific knowledge about aging. Above all else, we hope that this resource stimulates interest and work in this exciting and emerging field of education.

Fran Pratt
Donna Couper

Acknowledgments

This publication was developed under the auspices of the National Academy for Teaching and Learning about Aging (NATLA). NATLA promotes education about aging-related issues in K–12 schools and teacher preparation colleges and universities. It encourages the infusion of topics on aging into curriculum and instructional materials for different subjects and across grade levels. Since 1983, NATLA (formerly the Center for Understanding Aging) has played a leading role in advocating public education about aging at all levels, with emphasis on elementary and secondary schools. NATLA is based at the University of North Texas (UNT), through collaboration with UNT's College of Education, Department of Applied Gerontology, and Texas Institute for Research and Education on Aging. The university base for NATLA was made possible through the foresight of Stanley Ingman, Director of UNT's Center for Public Service, Jean Keller, Dean of the College of Education, and Richard Lusky, Director of the Department of Applied Gerontology. NATLA's northeast office is located in Southington, Connecticut, thanks to arrangements made by Beverly Hynes-Grace and The Hartford Financial Services Group, Inc.

The National Retired Teachers Association, a division of the American Association of Retired Persons, works in cooperation with NATLA to develop educational reform models for retired and current teachers. Experience on collaborative NRTA-NATLA projects during the writing of this publication helped clarify important issues. The support of Annette Norsman, Director of NRTA, Brenda Sulick, and the NRTA staff have assisted NATLA in developing and implementing new strategies for change.

This publication was written under a grant from The Retirement Research Foundation. We are exceptionally grateful to Marilyn Hennessy, Brian Hofland, and Sharon Markham at The Retirement Research Foundation for their understanding that educating young people about aging benefits them as they age.

Special acknowledgment goes to Jan Weaver, Director of NATLA, whose leadership role and keen understanding of gerontology education made possible this and other NATLA initiatives. More than any other person, Hiram Friedsam, Professor Emeritus at the University of North Texas, improved the depth and quality of this manuscript with his thorough review and extensive comments. Jane Tanner provided expert copy editing and layout. Addition-

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Donna Couper gives special tribute to Fran Pratt who has given more to the field of K–12 aging education than any other individual. As founder and former executive director of the Center for Understanding Aging, he has long recognized the role of textbook publishers in education about aging. The conceptualization, organization, and foundation of this publication are the result of his efforts.

Chapter 1

Why Education for Longer Life?

Education in the twenty-first century must prepare young people for the high probability that most of them will live long lives in a world that has an increasingly older population. This means that young people need to learn more than just the process of aging or about older people. It means increasing students' understanding of how population aging affects every aspect of society, including their own present and future lives. It means debunking widespread misinformation about aging, including stereotypes of older people that breed age prejudice and fear of growing old. It especially means helping young people to recognize and take advantage of their own potential for longer, healthy lives. Education for longer life means this and more.

Young people need practical and useful information about living longer in an aging world. They must develop an awareness that aging is a lifelong process in which they are already involved. They need to know that they can significantly control their own aging by healthy habits and lifestyle, and that growing older can be a process of growth and development. Young people who have the potential of living longer than all previous generations cannot afford to face the future plagued by a mindset of ageism and gerontophobia. Nor can society afford to have its future guided by people who grow up ignorant about aging and fearing what it means to grow old.

Growing interest in education about aging reflects a public awareness of a longevity revolution that is expected to continue well into the twenty-first century. The challenge for educators is to keep pace with new developments and changing conditions. The longevity revolution requires revolutionary changes in how and what we teach. Literacy about the why's and how's of aging is now essential to equip youths with the knowledge and skills necessary for them as aging individuals in an aging society.

Political and Social Dynamics of Educational Reform

Changing demographics alone will demand that aging education become a high priority in the decades ahead. Educators, parents, and policymakers will have to become more aware that the attitudes and actions of younger people are central to determining the status of older people. Educators will eventually deem literacy about aging to be as essential as technological literacy. Ready or not, the longevity revolution is creating the social and political climate that will put education about aging on the national public agenda for curriculum reform. Awareness of increased life expectancy and "global graying" will change education at all levels.

Education professionals understandably grow weary of constant demands to bring curriculum and instructional materials into line with whatever wave of educational reform is currently in vogue. Education is plagued by buzz words, catch phrases and slogans—such as "relevance," "excellence," and "back-to-basics"—that capture public imagination for the moment and then pass. More important and enduring are substantive issues raised by different causes and interest groups that have led publishers and curriculum developers in recent decades to develop new guidelines and materials on contemporary issues, such as gender, race, ethnicity, ecology, and disability.

Social and political forces influence what is taught in schools. Contemporary issues of public interest soon find their way into the never-ending current of educational reform. During the twentieth century, the Civil Rights, women's, and environmental movements set the political climate for several decades of educational reform efforts. From pre-school to graduate school, from vocational education to teacher preparation, educators accepted the challenge of the changing times. Now multicultural, diversity, and environmental issues are integral parts of instruction at virtually all grade levels and in many subject areas. Previously, teachers had generally overlooked the significance and relevance in education of racial, ethnic, gender, and ecology issues. However, gradual, persistent efforts by dedicated individuals, and forward-thinking professional education organizations, eventually led to systemic educational changes.

For example, in spite of considerable time and expense, educators deemed it important to revise the nature and extent to which they present ethnic and racial topics. Who today would rather have children taught from yesterday's textbooks, which implied that, except as slaves, African-Americans played no important part in American history? As we move toward a nation made of a "majority of minorities," would we be as well off using yesterday's instructional materials that gave children little or no basis for appreciating or valuing people from diverse backgrounds? From the standpoint of fundamental knowledge and basic skills, people may debate whether children are better educated today than they were in yesteryear. However, thanks to ongoing reform efforts, there is no doubt that today's schools have more relevant instructional materials, and that current teaching practices better equip students for life now and in the future.

The aging of the population brings many new social, economic, and political issues for schools to address. Although the educational system has largely ignored aging-related issues and its relevancy to K–12 education, as it did other social and political movements in their early stages, eventually teachers at all levels and in all disciplines must create opportunities to integrate age diversity into curricula and provide a lifespan approach to instruction.

That aging is on people's minds is obvious. Topics such as medical costs, elder care, nursing home reform, grandparents raising grandchildren, changing life expectancy, and the graying of America appear frequently in the media and everyday conversations. People are accustomed to reading newspapers or watching television news about topics such as the future of Social Security and Medicare, and the need for retirement planning.

On a personal level, awareness grows out of family experiences. Four- and sometimes five-generation families living simultaneously are common. Children not only have living grandparents, but often living great-grandparents, and sometimes great-great-grandparents. Some grandparents provide primary care for their grandchildren. Some people in their sixties who raised families, put their children through college, and prepared to retire, suddenly find themselves confronting a new responsibility of caring for their own parents, now in their eighties or nineties. Those without immediate personal experiences are aware of aging issues through their friends, relatives, and coworkers. Few people remain unaware that we are living in the midst of a longevity revolution and an aging population.

For the first time in history, more people are living into later life. No longer do most people die during infancy, youth, or what we now call middle-age. And like other revolutionary changes, the longevity revolution caught almost everyone by surprise. Americans born at the start of the twentieth century had an average life expectancy of only 47 years. They could never have envisioned a time when it would be an ordinary experience for people to live to 80 or 85. They could never have anticipated the possibility that before the next century, tens of thousands of their peers would live to be 100.

The subject of aging is naturally of growing interest to educators. Teachers are living in the same aging society and, in their own lives, have the same experiences and develop the same concerns as that of the general public. Although the relevance of aging to the classrooms may not be immediately apparent to teachers, eventually everything that is important to the public becomes important to schools. Just as schools have been tapped for other topics of broad social concern, such as recycling, anti-smoking, and seat belt awareness, numerous aging issues are finding their way into the classroom. A steadily growing movement for education about aging is making its way into the mainstream of curriculum and teacher education. More developers of curriculum and instructional materials are recognizing that aging-related issues are a legitimate and important part of K–12 education and teacher preparation.

Lag time inevitably exists between public recognition of an issue and recognition of its relevance to education. More time passes before developers of curriculum and instructional materials produce resources that match new public interests. Given the lead time necessary for developing new materials, it is in everyone's interest that educators minimize delay by accepting the challenge now.

Cultural Stereotypes to Confront

A chief task of education is to confront myths and misinformation and to equip students with accurate knowledge to apply to life decisions. Just as society increasingly recognized race, gender, and ethnic prejudice, awareness is now growing that our culture contains deeply entrenched elements of ageism (age prejudice and discrimination) and gerontophobia (fear of aging).

Ageist attitudes, as with other prejudices, become self-fulfilling. If children continue to learn from early age that growing old is bad, then as adults they are more likely to avoid older people, practice age discrimination, deny their own aging, and develop lower self-perceptions in later life. Education about aging that promotes balanced and realistic attitudes counters ageism by promoting a supportive environment that is important for successful aging. Since the concept of self is largely a reflection of the evaluative reactions of others, education can negate disparaging images that contribute to physical and psychological decline in later life.

A simple way to illustrate the depth of our society's negative view of aging is to go to any pharmacy or department store and browse through so-called humorous birthday cards. The overwhelming majority of cards designed for middle-aged people perpetuate falling-apart notions of aging and provide comic relief to real fears. Our culture contains a vast repertoire of ageist jokes with popular themes of senility, morbidity, sexual dysfunction, memory loss, and lying about age. Another way to recognize the prevalence of ageist attitudes is to listen to how people talk about aging: "Over the hill." "No fool like an old fool." "Thirty-nine and holding." "Young at heart." "You can't teach an old dog new tricks." Ageist comments are so prevalent that they often go unnoticed. Comments like "You don't look that old" are intended to be compliments, but carry the message that "Most people that old don't look so great." Seemingly innocent newspaper headlines such as "Old man 1997 hobbles aside to make way for Baby New Year" carry multiple negative messages about age and generational relationships. Even in social circles and public arenas where racist, sexist, and ethnic humor is unacceptable, ageist humor goes unchallenged.

Over the last few decades, a new stereotype of old age as being well, wise, and wealthy has emerged. Superhuman models of longevity run parallel to images of old age as sick, senile, and poor. "Positive" images of the sweet old lady, wise old man, and golden-ager are as stereotypical as "negative" images of impoverished, senile, elderly invalids. Euphemistic glorification of old age as the golden years and inflammatory portrayals of greedy geezers add feelings of envy and contempt to other feelings of sympathy and pity. Although images of the passive, bingo-playing, television-watching "elderly" are giving way to images of the active old on adventure tours and in Elderhostel programs, both stereotypical images overlook the diversity among older adults. This simplistic reverse in stereotypes increases divisions among people of ages in terms of who is more disadvantaged and deserving. A balanced, lifespan view of aging acknowledges the diversity of experiences, and the challenges and satisfactions across ages.

Cultural biases find their way into the minds of young people. With ageism and gerontophobia so widespread in our society, no wonder that research over the past two decades suggests that children as young as three have negative attitudes about aging. As children grow up, their perceptions of aging tend to become more negative. Although they may hold positive thoughts and feelings toward their grandparents or close relatives, these personal sentiments do not transfer to the general older population. People may have positive thoughts and feelings about personal characteristics associated with later life, but have negative ones about physical characteristics. Aging anxiety can affect attitudes and behaviors toward older people and influence one's own personal adjustments to aging.

Students lack information and understanding about aging that could help them recognize cultural biases. If lifespan concepts were introduced in early grades and integrated throughout the school years, young people could formulate personal beliefs based on knowledge that could benefit themselves and older persons.

If given the opportunity, young people have many questions about aging and what it is like to be an older person. For example, a Colorado representative of the American Association of Retired Persons was invited to talk with local secondary students who wrote anonymous questions in advance of the retiree's classroom visit. A sample of their questions reveals uncertainties, anxieties, and curiosity.

Prejudices
How does the public treat you because you are old?
Do kids call you names or stare at you when you walk around?
Are you afraid of teenagers?

Fears
Were you scared of getting old?
Is it hard to get around when you are older?
Are you afraid to die?

Relationships
Do you have any friends?
What was it like to see your children grow into adults?
How do you feel as a grandfather/mother?

Time and Space
Would you rather stay at home or go back to work?
What does everyone do all day?
What is a nursing home like?

Money
How do you live when you stop working?
Can seniors live on social security?
Do people try to con you out of money because you are older?

History
What was it like when you were young?
Did you fight in any wars?

Such legitimate and concerned questions reflect the students' genuine interest in learning about aging issues when given the opportunity. Not included in these students' questions were other relevant and more specific issues that they simply did not know enough to ask, such as: How have your experiences as a child influenced you as you grew older? What are you doing that you never thought you would do at this time in your life? What would you recommend to young people growing up today so that they can enjoy long, productive lives?

Young people want and need to understand how aging will affect them now and in the future. Knowledge can alleviate fears and provide a basis for making informed decisions throughout adulthood.

The Status of Aging-Related Content in Instructional Materials

Given the prevalence of myths and misinformation in our culture, it is no surprise that ageism and gerontophobia are reflected in teaching materials. Unfortunately, two primary education tools—textbooks and children's literature—have often been vehicles for developing stereotypes about older people and fostering negative views in children of their own future as people who will someday grow old.

In 1977, Edward Ansello's seminal study of children's literature gained national attention among gerontologists and educators. Through a systematic, exhaustive examination of over 600 children's books, Ansello found that over 80% contained no older characters. When older characters were present, they were typically portrayed in stereotypic fashion as sick, feeble, nonproductive, dependent, suffering from role loss, and old-fashioned or out-of-touch. Contrary to reality, male older characters outnumbered females. Minorities were greatly underrepresented. Younger characters were described with a range of physical and personality descriptors, but most older characters were simply described as "old." When additional descriptors were used for older characters, it was usually in such terms as "poor" or "sad." Younger characters were fully described as multifaceted and interesting people who were necessary to the story; older characters were portrayed as unidimensional shadow figures who were unimportant to the plot. Older characters were also underrepresented in pictures, and unlike younger characters, were seldom shown alone. Out of 22,000 illustrations contained in the children's books, less than one-half of one percent portrayed an older character alone.

Other studies of children's literature confirmed these findings. In an investigation of fiction for teenagers, David Peterson concluded that older people were underrepresented, underdeveloped in characterization, and given peripheral roles. Carolyn Baggett followed with a study in 1981 of 76 randomly selected novels for young adults. She noted that the greatest shortcoming was the proportionally small number of older characters.

A 1993 study of elementary school textbooks used in Puerto Rico (which adopts books from United States publishers) had similar findings. Content analysis of 65 textbooks revealed that relatively few older people appeared in the materials, male older characters outnumbered females three to one, minorities were underrepresented, and comparatively few adjectives were used to describe the older characters who did appear. Almost three-fourths of older characters were represented in passive roles. In half of the learning units containing older characters, there were no children; and in two-thirds of those with both older characters and children, there was no interaction between them.

The first comprehensive examination of the treatment of age-related issues in secondary school textbooks was conducted under an AARP Andrus Foundation grant by Elizabeth Markson and Fran Pratt, with findings published in 1996. A total of 91 recently published secondary textbooks for biology, general science, health, history, economics, government, civics, home economics, sociology, and psychology were reviewed. A team of professionals in both gerontology and secondary education analyzed the textbooks for content related to aging. The results of the study confirmed that educational materials currently in wide use at the secondary level contain little or no content related to aging issues. When textbooks do deal with aging topics, the content is usually brief, often misleading, and sometimes erroneous.

The topic of aging is almost totally ignored even in biology texts. Although aging is a universal experience of all living things and the aging process involves fundamental biological changes, such basic realities have escaped the attention of most authors, editors, and publishers of biology textbooks. Few of the textbooks reviewed mentioned even once such basic terms as *aging*, *lifespan*, *longevity*, or *life expectancy*. The only term with any relationship to aging found in a majority of the biology textbooks was *menopause*, and even then, it was often relegated to a short one-paragraph definition in an otherwise long chapter on the reproductive system. The term *life cycle* appeared in most texts in reference to cells, but without application to humans or to aging. One lengthy, comprehensive, and expensive biology textbook was found to contain not one single word about aging. The few texts that gave attention to the processes of aging discussed them only in terms of disease and decline. Seldom did materials focus on the potential for wellness in later life for those who follow good physical and mental health habits.

Similarly, high school history, government, and economics textbooks basically ignored the aging of the population and its vast implications for society. Texts for United States history and government seldom noted such far-reaching developments as the White House Conferences on Aging or the passage of such important legislation as the Age Discrimination in Employment Act, and the Older Americans Act under which the Administration on Aging was established. Economics books paid no attention to the enormous impact that population aging has on the design and production of goods and services, the advertising industry, the labor market, or public programs and services other than Social Security, which was usually given only a few lines of token coverage. In most cases, Social Security was presented in simplistic terms as just a pension program for retired workers, with no clear distinction between earned entitlements and welfare based on need, and no mention of ways in which Social Security benefits younger people.

Textbooks for health, home economics, psychology, and sociology generally contained some content on physical aging processes, but not on other matters of aging. For example, the impact of an aging population on society, individual adaptations to personal aging, or societal ageism and gerontophobia were seldom addressed. Depth and quality of coverage varied considerably from one text to another, and there were frequent cases of over-emphasis on negative aspects of aging. The differences among textbooks are illustrated by comparing three psychology books. One had 68 pages on aging, another had only information about Alzheimer's Disease, and still another contained nothing on aging. Even when courses such as health, home economics, psychology, and sociology do provide content on aging, students in general do not receive information on aging, because these are elective, not required, courses.

When later life issues are included in instructional materials, it is usually with a focus on problems that, in effect, equate aging with dependency, disease, disability, and dying. An example would be a psychology textbook with a chapter subsection titled "The Needs of the Elderly" but with no comparable sections on "The Needs of Adolescents" or "The Needs of Children," and without balancing subsections on the growth opportunities for older adults and the contributions. Certainly, problems experienced by portions of younger and older populations need to be addressed; however, a balanced approach considers how problems are presented and in what larger context. For example, a textbook would not present juvenile delinquency as characteristic of teenagers in general, but might discuss the causes of and alternatives for delinquency among some teenagers. The same writing guidelines are appropriate for instructional materials dealing with later life. (See Chapter 3, How Should Content on Aging Be Presented?, page 75.)

Developing curriculum and instructional materials that teach young people about aging involves much more, however, than just rooting out ageism, or just presenting a fair and balanced view of older people. Token changes do not meet the need. It is not sufficient simply to choose words carefully and sprinkle the text with photos of happy, healthy older people. Education involves more than changing how children feel about aging and older people. It requires substantive content about aging and aging-related issues across the lifespan.

That many books contain no substantial content on aging suggests that most authors and publishers do not yet recognize the relevance or importance of aging as a topic for education, or are unsure of where and how aging topics can be integrated. When given information about the need for a lifespan approach to education, authors, publishers, and curriculum developers can be expected to make appropriate content changes.

Recognizing Teachers' Needs

Suitable instructional materials and teacher training can increase the quality and quantity of instruction about aging. New curriculum and instructional materials will aid teachers personally and professionally. Improved, updated curriculum and instructional materials that infuse aging-related issues can have a direct and powerful impact on teachers. Busy teachers welcome well-developed materials that relate contemporary issues to their curriculum objectives. Teachers depend on curriculum developers, professional authors, and publishers to create logically organized, comprehensive, and attractively illustrated materials that make it easier to teach and learn.

General observations that aging-related topics are covered by teachers is supported by a relatively small research-base on classroom practices. In 1979, Jill Russell found that only 8.6% of the 204 Ohio teachers surveyed indicated that aging was regularly covered. In 1981, John Hoot found that only 3.6% of 500 Texas public school teachers surveyed made specific classroom provisions for teaching about aging. In a random sample of 600 Nebraska teachers in 1992, Lori Moseman found that only 1.4% intermediate-level teachers "always" and 4.6% "frequently" provided planned instruction about aging for their students at some time during the academic year. When aging was made part of classroom instruction, it most often involved teaching about aging and death being part of the life cycle or a planned intergenerational activity. (See information related to death and aging on page 33 and to intergenerational activities on page 121.)

That aging-related topics are not formally addressed by teachers does not mean that it is not part of what educators refer to as the hidden curriculum. Aging is such an integral part of all aspects of life that it is bound to emerge as a topic in the classroom. In Hoot's sample of 500 teachers, 52% said they addressed aging when it spontaneously arose in the classroom. Eleven years later, in Moseman's sample of 600, 40% indicated they always or frequently addressed topics related to aging when they arose spontaneously in the classroom. It is significant that so many teachers find that aging issues do come up in classroom settings even though it is rarely formally presented. This raises questions about the context and nature of conversations, and the extent to which teachers can adequately respond informally.

Why have teachers not integrated aging issues into instruction to the same extent as other diversity issues? Over half of the teachers in Russell's study indicated that it had simply not occurred to them that it was a plausible subject. Although more recent research is needed, it appears that little has changed over the past two decades. Perhaps the most common first response from teachers heard today is "But I never thought of it before."

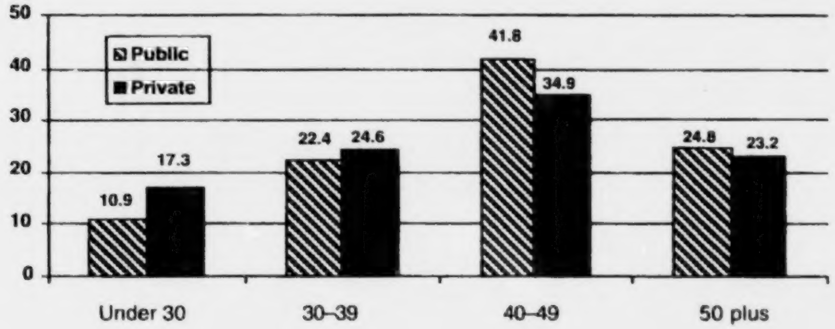
Cultural fears, biases, and lack of information explain why classroom topics are not routinely presented as they affect people across the lifespan. The common perception is that the subject of aging must be inherently boring, depressing, complicated, and irrelevant for young people, and without much content apart from medical problems. Negative associations persist when teachers have limited prior formal education and lack classroom resources about later life development. They hesitate to introduce a subject to their students that they have not studied themselves in school. Teachers are thus left to rely on family experiences or news stories that cannot be generalized to all people, and that may be unbalanced and inaccurate. However, most teachers are genuinely receptive to new, practical materials on aging that relates to their existing curriculum objectives.

Like everyone else, teachers have grown up in an ageist culture and have most likely absorbed ageist attitudes and assumptions. They may unwittingly present to children stereotypes and myths about aging during aside comments, casual conversations, or student interactions. Innocent comments may come in the form of half-joking, denigrating statements about their own or others' aging, in which age is blamed for mistakes, memory lapses, or inabilities. Even without a word, the insignificance of older people may be implied by addressing aspects of other life stages, but ignoring later life issues.

Heightened awareness of aging-related issues among educators will naturally evolve as their average age increases with the general population. According to U.S. Department of Education data, the average teacher age in

1993–94 was 43, three years older than in 1987–88, and about ten years older than the median age in the United States. (See Figure 1-1.) If this trend continues, the future teacher supply will consist of proportionately more teachers who are approaching retirement age.

Figure 1-1. Percentage Distribution of Teachers According to Age, by Sector: 1993–1994



Teachers can benefit personally and professionally from involvement with educational reform that debunks myths about aging. Convincing educators of the need for aging education is easy once they find beneficial applications in their own lives. Such has been the case of retired teachers who continue contributing to their chosen profession in substantive ways by volunteering to increase awareness about learning for longer life in their states and communities.

Consideration of the teacher as a person is essential to all school change. This is especially true of curriculum reform that is as personal as the topic of aging. Older teachers, just like older workers in other careers, recognize common accusations based on age. (See item 10 on age discrimination, under the section, Political and Economic Aspects of Aging, page 59.) Michael Fullan and Andy Hargreaves in *What's Worth Fighting for in Your School* describe ageism in school culture:

> We have a glossary of graphic labels for such [experienced, but less competent] teachers—"dead wood," "burned out," "time-servers," and "past-it"! Such labels do not really explain these teachers' difficulties, though. They explain them away. They are not labels that invite action, that suggest solutions. They are labels that legitimize inaction, that signal abandonment of hope.

> The fault is presumed to be in the teacher, deeply ingrained in their personality. Little point, therefore, in trying to change them. Not much you can do about bad teachers, especially bad old teachers, except wait for them to leave, retire or die! "If only I could get some new teachers. . . " or "wait until my new teachers arrive..."—these are principals' stock responses to this apparently irremediable problem.
>
> . . . . But there is nothing natural or inevitable about [disillusion or disappointment]. Much depends on the particular experiences these teachers have had, on how their schools have treated them. To some extent, aging is a cultural process of learning, of interpreting the ways that other people repeatedly treat you. . . . Trees do not kill themselves. "Dead wood" . . . is usually the product of an infertile, undernourished environment. (pp. 26–27)

Alert to changing faculty needs, one Connecticut high school principal requested an inservice workshop on teaching about aging. While interested in promoting aging education, the principal's other motive was to assist colleagues who themselves had concerns about health, retirement, eldercare, and age discrimination. The principal felt that his staff did not have adequate information about aging and community resources. He wanted a practical and positive inservice that addressed his staff's personal, as well as professional, needs. Although some teachers' initial reaction was "Why are we doing this?" their end response was interest and appreciation for having an inservice on a completely new topic and one that they could apply in the classroom and in their personal lives.

Teachers and students benefit from learning for longer life. Having more and better content related to aging in curriculum and instructional materials will have a significant and widespread impact on schools and the communities they serve.

Chapter 2

What Content Should Be Included?

What do young people need to know? What skills and knowledge will help them function effectively as aging persons in an aging society? What information is most useful to persons growing up and growing older? Students in general need practical understanding of aging that is applicable to daily life. Students do not need technical information more appropriate for persons specializing in gerontology and elder services careers. For example, what is needed to make the most of the potential for long life and to cope with common challenges throughout adulthood? As a family member, what would be useful knowledge for a future caregiver for an older relative? As an employee or employer, what practical information about aging could help in career planning and workplace settings? As a citizen, what does one need to know to comprehend and vote intelligently on public issues related to aging? These kinds of questions can guide decisions about what content to include in curriculum on aging.

People have pondered questions of aging for centuries, but gerontology—the scientific field of research on aging—is a modern development. Whereas much about aging has yet to be answered, a considerable body of knowledge developed over the past half century has challenged previously held ideas about aging. Although study of aging can be found around the world, most gerontological research is conducted in more highly industrialized countries like Japan, Great Britain, and the United States, for reasons of both necessity and capability. These countries have the most rapidly aging populations and the most resources for scientific research.

This chapter is divided into five sections that provide basic concepts on different aspects of aging: (1) demographic, (2) physical and biological, (3) psychological, (4) social, and (5) political and economic. Categorizing in this way is somewhat arbitrary, because gerontology concepts overlap in what is necessarily a multidisciplinary field. Nevertheless, each section sets forth basic concepts related to aging with a brief commentary on each. The concepts are based on the current state of research and scientific knowledge, yet some contrast sharply with popular notions about aging. (Appendix A provides a glossary of basic non-technical vocabulary that could be useful for persons developing and reviewing curriculum and instructional materials. Appendix B gives general learning objectives related to aging. Appendix C gives examples of how concepts can be infused within different disciplines and grade levels.)

Educators can use this chapter as a resource when they develop new or revised curriculum and instructional materials for different disciplines at

Concepts About Aging to Integrate in K–12 Education

Demographic Aspects of Aging

1. The age structure of different populations varies historically and geographically.
2. The older population is increasing.
3. The older population is becoming older.
4. Older women outnumber older men.
5. The older population is becoming more ethnically diverse.
6. Lifespan is constant; life expectancy changes.
7. Life expectancy increased dramatically in the twentieth century.
8. Continued gains in life expectancy are not guaranteed.

Physical and Biological Aspects of Aging

1. Aging-related physical change is not as important as we once thought.
2. Physical aging is an inevitable, multifaceted process.
3. Physical aging is a slow, gradual, life-long process.
4. Most living things have life cycles of patterned biological changes.
5. Disabilities, sensory loss, and chronic diseases increase with age but are not inevitable aging conditions.
6. The rate of physical aging among humans varies widely.
7. Sexuality is a characteristic of people at all ages.
8. Death and disability can occur at any age.
9. Most older adults maintain active, independent lives.
10. Lifestyle choices influence the quality and length of our lives.
11. The foundation for healthy aging is developed during youth.

Psychological Aspects of Aging

1. Psychological well-being is interconnected with physical and social health.
2. Significant memory loss is not normal aging.
3. Learning can be a life-long pursuit.

4. Personality and adaptability does not change as a result of age.
5. Wisdom is not automatic with age.
6. Most older persons are in good mental health.
7. Time perspectives change with age.

Social Aspects of Aging

1. Older people are more diverse than any other age group.
2. Each cohort of older adults brings its unique historical and cultural experiences with them as they age.
3. Most retired people are socially engaged.
4. The roles, status, and norms of age groups vary among cultures.
5. Ageism is rooted in cultural beliefs that are learned.
6. Language reinforces stereotypes of older adults.
7. The structure and dynamics of multigenerational families are changing.

Political and Economic Aspects of Aging

1. Financial status varies widely among older persons.
2. Inequities of gender, race, and ethnicity persist into later life.
3. Economic health in later life relates to financial conditions across the life course.
4. Early planning and savings strengthen economic health in later life.
5. Income sources and financial needs change in later life.
6. Population aging affects economic decisions and public policies.
7. Public policies affect the well-being of older adults.
8. Public programs for older adults affect the well-being of younger people.
9. Perceptions of retirement change with economic conditions.
10. Older persons sometimes face age discrimination in the workplace.
11. Population aging confronts society with difficult ethical choices.
12. Population aging creates new business and career opportunities.

elementary and secondary levels. It will help educators convey accurate information to their students. Parents, retired educators, community leaders, and others who are promoting aging concepts in education at the local and state levels will be able to use this material to make concrete recommendations for curriculum change. University- and college-based gerontologists and teacher educators can initiate joint collegiate efforts to refine and modify the listed concepts, and to develop productive collaborative relationships for improved teacher preparation.

These concepts and terms are intended to be comprehensive, but certainly not the final word on exactly what should be included in a child's education about aging. A few of the concepts are stated in the negative (e.g., significant memory loss does not characterize normal aging); they emphasize the necessary "unlearning" component of teaching about aging. Future research and healthy debate among educators and gerontologists will continue to clarify what we know, what is important, how it should be organized, and where and in what ways specific knowledge and skills should be infused into instructional materials. In the coming decades, educators will decide how to integrate aging-related concepts within a curriculum framework in ways that are appropriate for different disciplines and grade levels.

The challenge to educators is deciding the most appropriate places in the curriculum to apply these concepts and developing classroom activities that are appropriate for different disciplines and ability levels. Suggestions are made for which general subject areas are appropriate for integrating the broad categories of aging-related content. Many of these are obvious. Physical and biological aspects of aging fall naturally within science and health curriculum, and social aspects of aging are appropriate for social studies and home economics. However, most concepts cannot be relegated to one particular discipline. Quantifiable data on aging, such as age composition, changing life expectancy, or financial planning could be used in teaching mathematics as easily as dealing with automobile mileage, the price of bread, or distance to the moon. Any topic about aging can be used to develop oral and written communication skills in language arts and foreign languages. Educators in many subject areas and grade levels will find appropriate ways to present useful aging-related concepts.

Some of the concepts described here can be universally applied to humans, regardless of time and place. Many of the research findings on the biology of aging can be applied to Japan, France, Ecuador, Kenya, or any other country. However, not all of these concepts are universally applicable. Many are more relevant to the United States and highly developed countries.

and they may not be presently relevant to more traditional, less industrialized societies. For example, retirement or ageism have little relevance to societies in which people do not usually retire or in which age is venerated rather than debased.

It would be virtually impossible for any single textbook or set of instructional materials to do justice to all of the concepts listed here. If such materials did exist, few students would ever retain or apply all this information. But if these concepts were appropriately included in materials for use across the K–12 curriculum, students would have a better understanding of aging and have a more optimistic and informed view of their future as aging persons in an aging population.

While reviewing the concepts and background information, educators and developers of curriculum and instructional materials might consider how the concepts could benefit students and where the concepts could be naturally integrated into existing curricula.

Demographic Aspects of Aging

Basic knowledge about recent and projected population shifts can help young people understand why we face new opportunities and challenges related to aging. The longevity revolution from the twentieth and into the twenty-first centuries will have as profound an impact as did political revolutions of the eighteenth century. Every institution is affected by the age composition of the general population. People who understand the causes and effects of changing demographics will be better prepared to make decisions as individuals, family members, workers, and citizens.

When incorporating demographic information into instruction, teachers will need to emphasize that age 65 is an arbitrary, but convenient, marker commonly used to categorize old age in the United States. Some international data sources reporting to the United Nations use 60 to delineate the older population. Some writers are beginning to note that 65 is now too young to be viewed as the onset of old age and propose moving the demarcation to age 70 or 75. To characterize older people statistically as one group is problematic considering that their ages span a period of 30 to 40 years. Increasingly, demographers and other researchers are seeing the practical benefit of subdividing the 65-plus age group. In many of its reports, the U.S. Bureau of the Census uses five-year age groups (e.g., 65–69, 70–74) in presenting age compositions. Different age groups and verbal descriptions are often used by researchers and writers. The term *young-old* often refers to persons in their 60s or early 70s, and the term *oldest-old* generally refers to persons age 85 years and older. Frail older adults is a subcategory that refers to persons with significant health problems, although it is sometimes used inappropriately as a synonym for the oldest-old because not all 85-year-old persons are frail. Such subcategories reflect important distinctions within the over-65 population that may not be reflected in aggregate demographic statistics, not to mention individual variations. (See item 1 under Social Aspects of Aging, page 49.)

Demographic aspects of aging are relevant to a variety of disciplines. Factual and problem-solving activities can be incorporated as a natural part of health, mathematics, science, social studies, vocational education, and other disciplines. Comparisons of historical or geographical demographics with local community and personal family data can give students a personal frame of reference and make the topic more relevant. Among the most important demographic concepts are the following.

1. The age structure of different populations varies historically and geographically. Age structure refers to the percentage of the population at different ages. For a given area or nation, population growth and age structure depend on three factors: the fertility and mortality rates, and net migration.

Vast differences in age structure exists among different parts of the world. Most lesser-developed nations (e.g., Africa, Asia, and Latin America) have relatively young populations. Many African countries have less than 5% of their populations age 60 and over, while Japan and some European countries have older populations already representing over 20% of their populations. Although the percentage of older persons is greater in more developed nations, the most dramatic age structure shifts are occurring in less developed nations where birth and mortality rates are declining more rapidly. Government policies, such as China's restriction of one child per couple, can also affect the age structure of countries.

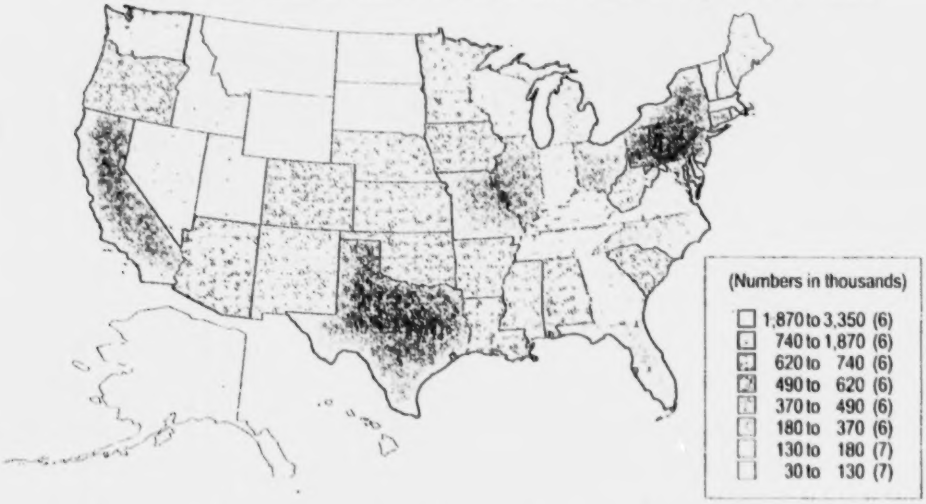
Migration patterns affect regional and local differences in age structure. For example, notable age structure differences exist among cities and states in the United States. Less populated Farm Belt states like the Dakotas have greater proportions of older adults due primarily to young adults migrating to urban areas of other states for economic reasons. Inner cities and suburbs within a metropolitan area may have different age structures that can change over time, as in the "graying" of suburbs that can occur as children grow up and leave home. Teachers and students can appreciate historical and geographic shifts in age structure by comparing their communities and states with those of other times and places. (See Table 2-1 and Figures 2-1 and 2-2.)

Table 2-1. United States Population, by Age and State, 1994

State	Total Population (in 1,000s)	Percentage under Age 18	Percentage Age 65 plus
Alabama	4,219	25.6	13.1
Alaska	660	31.6	4.6
Arizona	4,075	27.9	13.4
Arkansas	2,453	26.1	14.8
California	31,431	27.6	10.6
Colorado	3,656	26.5	10.1
Connecticut	3,275	24.1	14.2
Delaware	706	24.8	12.7
Florida	13,953	23.4	18.4
Georgia	7,055	26.8	10.1
Hawaii	1,179	25.8	12.1
Idaho	1,133	29.9	11.6
Illinois	11,752	26.2	12.6
Indiana	5,752	25.6	12.8
Iowa	2,829	25.8	15.4
Kansas	2,554	27.0	13.9
Kentucky	3,827	25.3	12.8
Louisiana	4,315	28.6	11.4
Maine	1,240	24.7	13.9
Maryland	5,006	25.2	11.2
Massachusetts	6,041	23.6	14.1
Michigan	9,496	26.6	12.4
Minnesota	4,567	27.2	12.5
Mississippi	2,669	28.3	12.5
Missouri	5,278	26.1	14.1
Montana	856	27.8	13.3
Nebraska	1,623	27.2	14.1
Nevada	1,457	25.8	11.3
New Hampshire	1,137	25.7	11.9
New Jersey	7,704	24.4	13.6
New Mexico	1,654	30.1	11.0
New York	18,169	24.8	13.2
North Carolina	7,070	24.8	12.5
North Dakota	638	26.9	14.7
Ohio	11,102	25.7	13.4
Oklahoma	3,258	27.0	13.6
Oregon	3,086	25.4	13.7
Pennsylvania	12,052	24.0	15.9
Rhode Island	997	24.1	15.6
South Carolina	3,664	26.0	11.9
South Dakota	721	28.8	14.7
Tennessee	5,175	25.1	12.7
Texas	18,378	28.9	10.2
Utah	1,908	35.2	8.8
Vermont	580	25.2	12.1
Virginia	6,552	24.5	11.1
Washington	4,343	26.4	11.6
West Virginia	1,822	23.5	15.4
Wisconsin	5,082	26.5	13.4
Wyoming	476	28.8	11.1

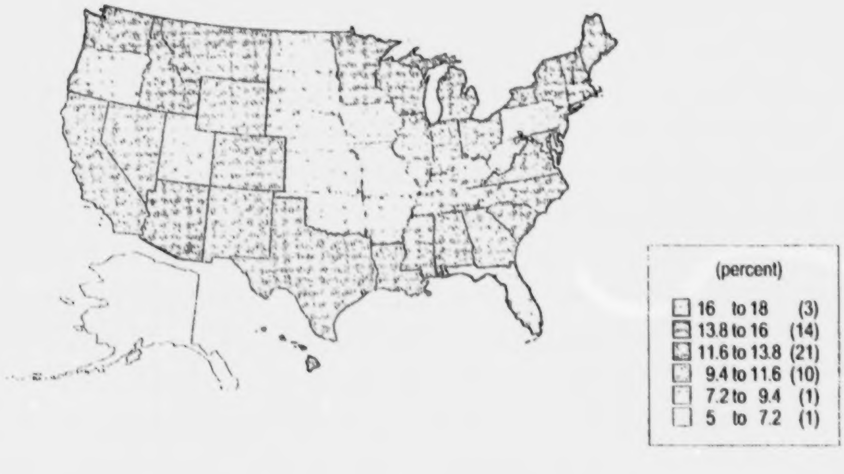
Source: Based on U.S. Bureau of the Census, Table 34. Resident Population, by Age and State, 1994, in *Statistical Abstract of the United States, 1995.*

Figure 2-1. United States Population: Number Aged 65+, 1994


(Numbers in thousands)
1,870 to 3,350 (6)
740 to 1,870 (6)
620 to 740 (6)
490 to 620 (6)
370 to 490 (6)
180 to 370 (6)
130 to 180 (7)
30 to 130 (7)

Data Source: U.S. Bureau of the Census, Statistical Abstract of the United States, 1995.

Figure 2-2. United States Population: Percent Aged 65+, 1994


(percent)
16 to 18 (3)
13.8 to 16 (14)
11.6 to 13.8 (21)
9.4 to 11.6 (10)
7.2 to 9.4 (1)
5 to 7.2 (1)

Data Source: U.S. Bureau of the Census, Statistical Abstract of the United States, 1995.

2. The older population is increasing. The worldwide trend in the past century has been fewer births and rapidly decreasing mortality, resulting in an increase in the number and proportion of the older population. Although declining birth and death rates were first noted in the developed nations of Western Europe during the nineteenth century, for the most part population aging is a twentieth-century phenomenon. Population aging was initially much faster in the United States and other more-developed countries than in less-developed countries but the latter are now experiencing declining fertility and mortality rates, similar to and sometimes faster than what occurred in the industrialized nations. Thus, population aging is now a worldwide phenomenon.

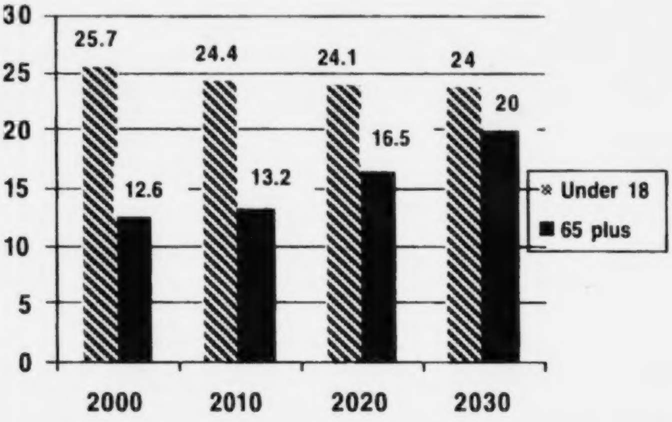
Although population projections depend on underlying assumptions about fertility, mortality, and migration that may or may not prove accurate, current trends suggest continued increases in the older population. In terms of absolute numbers, slightly over half (55%, 176 million) of the world's older population (aged 60 and over) lived in developing nations in 1990. By 2025, the proportion is projected to increase to over two-thirds (68%, 277 million).

In the United States in 1900 the number of persons aged 65 and over was about 3 million, or 1 in every 25 persons. By 1994, the number had increased to over 33 million and represented 1 in 8 persons. The projected population aged 65-plus in the United States is estimated to more than double to 80 million between 1995 and 2050, or about 1 in 5 persons. The most rapid increase is expected to occur between 2010 and 2030, with the aging of the baby-boom cohort, those born between 1946 and 1964.

Increases in the older population has led to gradual increases in the median age. Two hundred years ago the United States was a young country in more ways than one. At that time the median age was about 16 years. By 1860 it increased to 20 years. The median age today is approximately 34, and in the year 2030 it is projected to be about 42.

Figure 2-3 illustrates the projected shift in age structure in the United States during the next thirty years, with the proportion of older adults increasing from 13% in 2000 to 20% in 2030, and the proportion of youth under age 18 remaining constant at around 24% during this same period.

Figure 2-3. Projected Age Distribution of United States Population, 2000 to 2030 (percent)

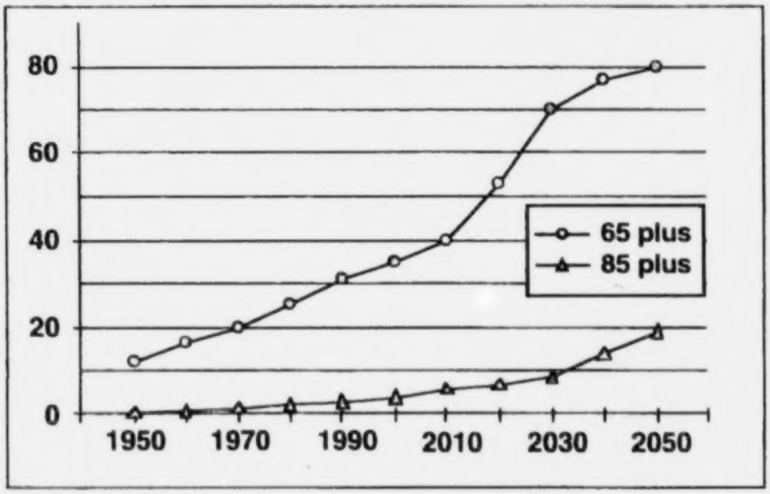


Source: U.S. Bureau of the Census, Population Projections by Age, Sex, Race, and Hispanic Origin: 1995 to 2050, Series P25-1130, February 1996.

3. The older population is becoming older. In many countries of the world, including the United States, the oldest-old (those 85 years and over) are the fastest growing age group. In France, the very-old age group consists of over 11% of its 65-plus population. Of all countries, the United States has the greatest number of persons aged 85 and over—about 3 million in 1990, even more than China with about 2 million aged 85 and over.

In 1994 in the United States, persons aged 85-plus comprised 10% of the total aged 65-plus population and just over 1% of the total population. By 2050, the 85-plus population is projected to be 19 million or 24% of the 65-plus population and 5% of the total population. The 85 and older age group in 1991 was twenty-five times larger than in 1900 in the United States. By comparison, the 65 to 74 age group increased eight times and the 75 to 84 group increased thirteen times since 1900. If the mortality levels remain constant, then by the middle of the next century about 80 million people in the United States will be 65 years or older, compared to just 12 million in 1950. Of the projected 80 million older population in 2050, almost 20 million (almost 25% of the older population are expected to be age 85 and over, compared to only about one-half million in 1950. (See Figure 2-4.) The number of centenarians in the United States, people 100 years or older, is projected to increase from the estimated 50,000 in 1990 to over 800,000 by the year 2050. These trends are similar to projections in other developed countries.

Figure 2-4. Growth of Older Population
Actual and Projected, 1950 to 2050 (millions)



Source: U.S. Bureau of the Census, Current Population Reports, P23-190, 1996.

Students may be able to personalize these significant trends by graphing local and state demographic data.

4. Older women outnumber older men. The older the population, the more female it tends to be. The increase in the ratio of females to males with age has been called the feminization of later life. Male mortality exceeds female mortality at every age in almost all countries. The exceptions are in cultures that have a strong preference for sons and where death rates of female children are higher than male children. By age 80, the world's female population outnumbers men by nearly 2 to 1. Women in the United States currently have an average life expectancy at birth of about 79 years, compared to 72 years for men. For those between the ages of 65 and 69, women outnumber men 6 to 5. By age 85, the ratio of women to men is approximately 5 to 2. In 1994, approximately 7 out of 10 people in the United States age 85 years and over were women. Thus, when people talk about aging in later life, they should realize that they are talking mostly about older women.

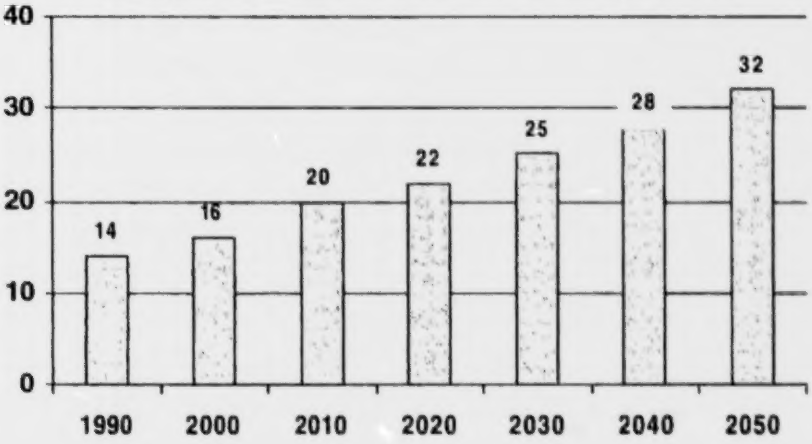
The widening disparity between males and females did not occur until after World War I. During the late 1800s male and female life expectancies in the United States were actually comparable. Now, the mortality gap between males and females begins at birth, and widens with age. In 1990, the female advantage in life expectancy at birth in more developed countries was about 7 years; in less developed countries, females outlived males by about 3 years.

In the United States, women at age 65 have a remaining life expectancy of about 19 years compared to men at age 65 of 15 years.

Researchers have investigated numerous social and biological theories about gender differences in longevity with no conclusive explanations. That females in almost all species outlive males suggests possible genetic factors. Environmental and lifestyle factors also influence the gender gap in life expectancy. Historically, alcohol and tobacco consumption, and vehicular and industrial accidents affected men more than women, but differences in gender behavior may not hold for future generations.

5. The older population is becoming more ethnically diverse. In the United States and other western countries, the increased number and proportion of older minorities are the result of changing immigration patterns, and fertility and morbidity rates. (See Figure 2-5.) African-Americans are currently the largest component of the older minority population, but older Hispanics are projected to outnumber African-Americans by the year 2020. Although Asian and Pacific Islanders and Native Americans represent the smallest components of the older population, they are growing at faster rates.

Figure 2-5. Growth of the Minority Older Population: 1990-2050
Minority Age 65+ as Percent of Total 65+ Population



Source: *Aging America: Trends and Projections*, 1991

Diversity is as great *within* older minority populations as it is *among* different minority groups. Within the broad minority groupings are a variety of linguistic, religious, and cultural backgrounds. The contributions and cultures of ethnic and racial minorities add to the rich diversity within the older population. Experiences of different aged minority persons can naturally be included in any instruction about racial and ethnic diversity.

6. Lifespan is constant; life expectancy changes. These two terms are sometimes incorrectly used interchangeably. *Lifespan* is the maximum number of years that members of a species can be expected to live. It is the age that could be attained under optimal conditions and healthy, accident-free circumstances. Although opinions differ among biologists, the maximum human lifespan is thought to be about 120 years. By comparison, the lifespan of the tortoise is about 150 years, and for the dog about 20 years. From a genetic standpoint, scientists assume that the lifespan of humans thousands of years ago could have been as long as it is now. Popular media discussions about possibilities of extending the lifespan to 150 to 200 years as a result of scientific discoveries are to date only speculations, but will be a continued area of interest and research.

In contrast to lifespan, *average life expectancy* varies historically and geographically, depending on such factors as income, nutrition, medical advances, health care, and war. Average life expectancy is the average number of years a person at birth can expect to live at current mortality levels. Projected life expectancy calculations are based on current circumstances which can change over time. Historically, the most significant increases in life expectancy occurred during the mid-twentieth century. These occurred primarily as a result of improvements in nutrition, sanitation, and control of infectious diseases, resulting in more people surviving infancy and early childhood, and adding decades to average life expectancy. (See item 8 under Physical and Biological Aspects of Aging, page 33.) In recent decades, increases in life expectancy have resulted from improved health practices and medical technological advances benefiting middle-aged and older adults.

Average life expectancy at birth is different from *remaining life expectancy*, which increases with every year of life. In this sense, the longer a person lives, the longer he or she can expect to live because remaining life expectancy considers only those who are still alive at a particular age. For example, people who are currently age 80 were born when average life expectancy was less than 50 years, but they now have a remaining life expectancy of approximately 8 years, or to age 88. (See Table 2-2.) These older persons have survived diseases and accidents that others of their contemporaries experienced at earlier years.

Table 2-2. Remaining Life Expectancy by Age

Age	Average Remaining Years	Remaining Life Expectancy
1	75	76
10	66	76
20	57	77
30	47	77
40	38	78
50	29	79
60	21	81
70	14	84
80	8	88
90	5	95
100	2	102
105	2	107

Source. National Center for Health Statistics. U.S. Decennial Life Tables for 1989–91, Vol. 1, No. 1, Hyattsville, Maryland, 1997.

To young people whose time perspective is shorter, remaining life expectancy for 70- and 80-year-olds may seem like a considerable time. This can offset any vague pre-existing notions of older persons having only a few, insignificant number of years left. Children and adolescents have difficulty contemplating living much longer than their current age. Therefore, problem-solving activities about life expectancy and life stages, beginning in the early grades and into high school, can help students conceptualize long life for others and themselves.

7. Life expectancy has increased dramatically in the twentieth century. Archaeological and historical records of human life indicate millennia of virtually no growth in longevity, followed by a slow and gradual rise over many centuries, and then a precipitous climb in longevity in modern times. Throughout history, some people have lived into their 80s and beyond. However, increases in overall life expectancy, especially during this century, have meant that more people have survived birth, infancy, and childhood in order to reach later life. Advances in nutrition, sanitation, and immunization have dramatically altered mortality from infectious diseases such as diphtheria, typhoid, influenza, and small pox. These advances have made it possible for more people to survive childhood and live into old age. Infant mortality rate in the United States in 1900 was more than 100 per 1,000 births compared to about 10 per 1,000 today. Most deaths in the United States now occur at older ages, with half of women and one-third of men dying at age 80 and over.

When the United States was founded, average life expectancy was about 35. At the turn of the twentieth century, average life expectancy was 47 years and only 4% of the American population was aged 65 and over. Since then, life expectancy at birth in the United States has climbed by over 60%, now standing at about age 76, but as noted above, it is higher for females (79 years) than for males (72 years).

Most major areas of the world, including less-developed countries, have experienced increases in their life expectancies, although there are exceptions in areas suffering from war, famine, or epidemics. Japan currently has the world's highest life expectancy at birth, approximately 79 years, with most of the developed countries in the 75-to-78-year range. In some less-developed regions, the life expectancy at birth increased as much as 25 years within one generation, but throughout the developing world it varies tremendously, and in many areas it is still below 50 years. However, it is in the less-developed nations that the potential for greatest increase exists.

8. Continued gains in life expectancy are not guaranteed. Although life expectancy has steadily increased during this century, continued gains are dependent on favorable conditions. Unstable political, economic, and environmental circumstances can dramatically affect health status and mortality rates. For example, increases in infectious disease—such as the Spanish influenza of 1918 and modern epidemics such as HIV-virus or threats of drug-resistant tuberculosis—can single-handedly change life expectancy. Political disorganization can alter mortality rates as has happened in the former republics of the Soviet Union, which once reported life expectancies comparable to the United States but now mirror statistics characteristic of less-developed countries. Increased alcohol and tobacco consumption as in Asia and other regions may also alter life expectancy trends. Globally, life expectancy in the future may be determined by how successfully the world deals with such threats as overpopulation, deforestation, nuclear waste, holes in the ozone layer, and the spread of infectious diseases. Classroom instruction can help students realize the importance of individual and societal responsibility in valuing and promoting longer lives.

Physical and Biological Aspects of Aging

Learning about physiological changes across the lifespan prepares students for their future. In *How and Why We Age*, Leonard Hayflick, a pioneer in the biology of aging, notes that students should be "exposed to at least a modicum of knowledge about the biological changes that most of them will live to experience." Young people will be better equipped for life if they understand physical and biological aspects of aging and how they can improve their own health and potential for longevity. Physical changes affect overall well-being and can modify social behaviors and interactions with others.

The explosion of knowledge about the biology of aging in recent years can be used to improve the quality and length of our lives. We have the potential of enabling more people to achieve the longer lives now enjoyed by eighty- and ninety-year-olds. A lifespan approach to elementary and secondary health education could be part of an overall national strategy to continue extending wellness and diminishing long periods of chronic illness in later life.

Although teaching about physical and biological aspects of aging is fundamental, it is not the only, or even primary, approach to understanding aging. Just as we would not allow education about gender or race to focus exclusively on anatomical differences between males and females or differences in skin pigmentation between Caucasians and African Americans, education about aging is more than skin and anatomy differences between young and old. An overemphasis on outward physical changes that excludes other aspects of aging is not balanced or appropriate. It perpetuates a prejudice of valuing people for how they look, not who they are. Effective education about aging helps students understand that obvious physical signs of age, such as skin texture and hair color, are not of much help in defining and understanding people.

Additionally, physical and biological aging is not about "them." It is about "us," about "me." The more curriculum and instructional materials connect present behavior with future life, the more relevant those aspects of aging will be for young people. A personalized approach may motivate healthy decisions and improve the quality of students' lives long into adulthood. Education about later life should allow students to understand better that their behavior can reduce the risks of injury, disability, or death at younger ages, and increase the odds for longer, healthier living.

Educators will want to present information based on current research that continues to sort out the effects of disease and the environment, compared to normal aging effects. Even common meanings of *age* and *aging* are being challenged. In the past, the noun *age,* referring to time, and the verb *age*, referring to physical decline, were typically viewed as parallel occurrences, and thus commonly used with both meanings in mind. We considered age and aging to be directly correlated, if not synonmous. However, based on current research, we now know that although *age* (as in time) is a contributing factor of *aging* (meaning physical decline). We can no longer equate these two meanings. We understand that human aging has multiple outcomes and is not the singular result of time lived. Curriculum and instructional materials must struggle with the limitations of language so that students understand the important distinction. Although age (time) is routinely used to explain or excuse physical and mental decline, many other factors—such as diet, exercise, disease, education, personality, financial status, and social circumstances—are usually better explanations. Even persons who are genetically predisposed to certain physical maladies can influence the outcome by health practices or lifestyle choices.

Finally, teachers will want to provide balanced, factual information with examples and experiences that underscore the range of physical conditions among the older population, rather than focusing unduly on nursing home populations, without consideration of the majority of older adults who live independently. Instructional materials and school activities can emphasize the diversity of aging experiences and the degree of choice we have in personal aging as opposed to the distorted message of inevitable disabilities.

The concepts below can be incorporated into various course topics. Consideration of physical and biological aspects of aging can help students appreciate and understand art and literature. Health education, physical education, and family and consumer sciences are especially suited to instill in students concepts that encourage wellness across the lifespan. These concepts can also relate to various social studies and vocational education subjects.

1. Aging-related physical change is not as important as we once thought. Much of what was once considered to be age-related is now understood to be the result of disease, abuse, disuse, or maladjustment. Many physical declines are no longer attributed to normal aging processes. We once thought that muscular atrophy was normal, that muscle mass could not increase in old age, and even that older adults would "wear out" if they exercised too much. Now, exercise programs are common offerings in rehabilitation and elder housing settings. People were once resigned to loss of teeth and the use of dentures in later life. Now these losses are attributed to malnutrition, poor dental hygiene, and periodontal disease. Coronary diseases were once considered inevitable with age, but comparative studies of older populations in the United States and other countries reveal that while cardiovascular diseases may be common, they are not inevitable. Some health problems such as diabetes were once considered almost exclusively geriatric diseases. These health problems are now increasing among younger adults, challenging assumptions about the extent to which chronological age is a factor in their incidence. Although age is a contributing factor in many conditions, environmental assaults can play key roles in the progression of decline. Physical afflictions associated with later life are most often related to specific life circumstances, not to change with the passage of time. (See item 10 on lifestyle choices, page 41.)

2. Physical aging is an inevitable, multifaceted process. Physical changes that are a part of normal aging involve most body parts and systems: Liver, kidney and lung functions tend to decline. Muscle strength is lower. Skin and hair changes are prominent associations with age. Senses (sight, hearing, taste, smell, and touch) tend to decline with age. Hormonal levels decrease. However, although these changes are characteristic of the aging process, they are not diseases and do not have the same debilitating or limiting effects as when compounded by conditions of disease.

No single factor regulates aging. No single theory of biological aging fully explains the aging process. Lifestyle, environment, and genetic factors play an interactive role in biochemical and physiological changes that strongly shape the physiological changes that occur in normal aging processes. These interactive and interdependent processes influence the health and longevity of individuals and account for the diversity found among older adults.

Research that seeks to understand the causes of aging continues, leading to speculation that it might be possible to retard physical aging processes. Better understanding of biological aging processes may lead to increasing life expectancy and extending the number of years in which people might live in good health.

3. Physical aging is a slow, gradual, life-long process. Normal aging in later life is not a swift, sudden, "over-the-hill" experience at forty, sixty, or at any other age. It takes time to grow old. Aging is not just a later-life event. Human development does not end after adolescence, but changes occur throughout adulthood. Although aging is commonly associated with physical decline in later life, changes proceed gradually over time. Some people start experiencing loss of visual acuity beginning in their early teen years, which becomes noticeably different in their forties. Reaction time begins declining for most people during their thirties. Changes in the reproductive system preceding menopause in women is a gradual transition over many years.

As noted earlier, not all slow-developing losses are the result of aging, but rather disease, abuse, or disuse. For example, slow, progressive memory loss due to Alzheimer's disease that possibly afflicts 30 to 50% of persons over age 85 is not normal aging. Hearing loss, common in later life, is often a cumulative effect of disease or environmental damage over many years.

4. Most living things have life cycles of patterned biological changes. Most organisms, from single cells to plants to animals, proceed through a process of growth, maturity, and decline. The number and duration of developmental stages within the life cycle varies among species. (See Table 2-3.) Compared to other mammals, humans live longer, are born more dependent, and spend a greater part of their total lifespan reaching the point, literally and figuratively, of being able to stand on their own. In contrast, salmon are never "parented" and are on their own from birth. Within days of spawning, however, salmon deteriorate rapidly and die.

Table 2-3. Longevity Records and Growth Patterns of Selected Mammalian Species

Mammal	Length of gestation (months)	Age of puberty	Length of growth period	Life Expectancy-Mean (months)	Maximum Lifespan (months)
Human	9	144	240	912*	1440*
Elephant	21	156		480	840
Horse	11	12	49	300	744
Chimpanzee	8	120	-	210	534
Cat	2	15		180	336
Guinea pig	2	2	11	24	90
Mouse	0.7	1.5	6.3	18	42

*Approximate figures in 1997.

Adapted from Rockstein, Morris, Chesky, Jeffrey A. & Sussman, Marvin L. "Comparative Biology and Evolution of Aging. In Finch, Caleb & Hayflick, Leonard (Eds), *Handbook of The Biology of Aging*, New York: Van Nostrand Reinhold, 1977.

Interestingly, as Leonard Hayflick noted, not all animals appear to physically decline with age. Some fish (sturgeons), amphibians (alligators), and reptiles (Galapagos tortoise) continue to grow slowly without evidence of decline. Although these non-aging species still die as a result of diseases, accidents, and predators, their chances of death do not increase with age.

However, with few exceptions and wide variations among species, the general concept of a life cycle is applicable to most living things.

5. Disabilities, sensory loss, and chronic diseases increase with age but are not inevitable aging conditions. Physical changes in later life increase one's vulnerability to health problems, so that the frequency and severity of abnormal conditions increase with age. The older the organism, the greater the risk of impairment. The young-old (65–74 years) are less likely to have serious health problems than the oldest-old (those over 80 years). Increased susceptibility results in an increase in diseases and disabilities in later life. Aging-related decline weakens biological resources that affect health conditions, which can leave older adults more vulnerable to some infectious illnesses such as influenza and pneumonia.

Chronic illnesses common among older persons are arthritis, hypertension, heart disease, and hearing impairment. Other chronic conditions that increase with age are dementia, diabetes, osteoporosis, and Parkinson's disease. In contrast to these chronic diseases, younger people are more likely to suffer from acute illnesses, such as measles and chicken pox. Although young people can also develop chronic health problems, the incidence and prevalence is higher in older age groups. Women, because they live longer than men on average, are more likely to have health disabilities. Chronic conditions require treatment that addresses social, environmental, and psychological considerations, as well as the biological aspects of illness.

But aging is not synonymous with disease and disability. Worsening health conditions in later life are common, but are not normal conditions of later adulthood, just as whooping cough and polio were once common among children, but were not normal conditions of childhood. That disease and disability are not normal aging processes is demonstrated by the fact that many people of older ages are not suffering from these same problems, while some of younger ages are. Thus, expressions like "I'm getting old" are inaccurate explanations for health problems in later life. Accidents, infections, abuse, and disuse are more probable causal factors for diseases and disabilities, than is chronological age.

Distinguishing between physical decline that is normal and that which is due to disease and environmental influences is complicated. Past research on physical decline in old age was often based on studies of sick, frail people, especially nursing home residents. Newer research is looking at more representative samples of well-elders in order to discern what is the result of normal aging versus other factors. Future research will contribute further to sorting out the distinction between aging and illness, and the interaction of nature and nurture factors of aging.

A balanced approach is (1) older people are in better health and face less physical deterioration due to age than previously thought; and (2) later life often requires adjustments to vary degrees of physical decline. Understanding the potential for healthy, active lives may motivate persons of all ages who might otherwise be resigned to serious decline relatively early in middle and late adulthood. Perhaps one day updates of curriculum and instructional materials will be able to report that people are living longer with fewer disabilities and diseases.

6. The rate of physical aging among humans varies widely. Although we share common overall patterns of aging during infancy, adolescence, middle age, and later life, specific structural and physiological changes occur at different times for different people. The timing and degree of physical changes are more uniform and synchronized during infancy and childhood. Furthermore, variations in physical aging increase with age.

Within each person, effects of aging mix with other factors influencing health. Each person begins life as an individual with a distinct mix of genes, and throughout life becomes more unique with each new circumstance and experience affecting his or her physical and emotional development. Individuals differ in how they use their bodies over time, resulting in wide variations of physical health among persons of similar ages. Organs and organ systems decline at different rates. Physical decline comes faster for some than for others.

Chronological age does not predict individual performance or health status, and it tells little about the overall condition of a given person's body or its various parts or systems. A man may have hearing loss at 50, yet play baseball at age 70. A woman may have gray hair at 40 but still hike for miles at age 80. Although 80-year-olds are more likely than 60-year-olds to have functional limitations, some 80-year-olds are running marathons, while some 60-year-olds are bedridden. While a general process of aging is common to everyone, physical aging is different for each person. In this sense, no two people age the same.

7. Sexuality is a characteristic of people of all ages. Sexuality includes diverse feelings and behaviors over the lifespan. Although it is categorized in this publication under physical characteristics, it is as much, if not more, a psychological and social function as it is physical. Experiencing love, romance, and sexual interest is a natural part of being human. A person does not become sexless with age. Intimacy, sexual expression, and caring relationships are not the sole domain of youth. The desire for satisfying emotional and physical companionship does not change because of age.

As with other ages, sexual activity among older adults ranges from frequent to none. The same kinds of individual variations that appear in other aspects of aging also appear in sexual interest and behavior.

Disease-related changes in later life are more likely to affect sexual behavior adversely than age-changes alone. Health problems, more common in those over age 75, inhibit sexual interest and activity at all ages. Medications may hamper sexual responses. Apart from disease, age-related changes in the reproductive system usually lead to gradual adaptations in sexual behavior, not dramatic alterations.

For many adults, sexuality includes pleasurable sexual activity. For many older persons, changes in sexual behavior are a result of diminished opportunities, especially due to the death or illness of a spouse or partner. In addition to physical health and availability of sexual partners, attitudes affect changes in sexual behavior in later life. Social attitudes that relegate being "sexy" to youth can adversely influence sexuality in later life. False assumptions about sexuality in later life are evident from common derisive themes in jokes, television programs, and daily conversations. Delaying sexual activity until adulthood may seem more reasonable if young people understand that sexual activity is not a now-or-never occurrence, but rather an activity continuing through adulthood.

Previous sexual practices influence later sexual practices for individuals and among different age-cohorts. Societal attitudes about sexuality when growing up affect personal attitudes and behaviors when growing older. The current cohort of older adults who came of age when talking about sex was taboo will be different in their sexual interest and activities from those who became sexually mature during the "sexual revolution" when birth control pills became available, and from those who are growing up during an era of increased fear of sexually transmitted diseases.

8. Death and disability can occur at any age. Curriculum and instructional materials that associate aging with death, often at end chapters, convey inaccurate messages about both aging and death. Aging is about living, and death and disability can interrupt the individual life course at any age. Injuries and disabilities can interfere with normal developmental progression for younger and older people. Like other organisms, humans can die without completing their life course.

Although people today commonly live long lives in relatively good health and do not die until old age, disabilities and death still interrupt the normal life course for many during youth. Dramatic declines in infant and child deaths during this century may contribute to young people's risk-taking behavior, as evidenced by the increase in deaths by accident, homicide, and suicide among teenagers—13% higher in 1994 than in 1983. Unfortunately, youths who witness deaths and injuries among their peers may especially appreciate this teaching concept.

People today may be more likely to associate death with old age because of declining mortality rates at younger ages during the twentieth century. However, it is no more defensible today to group "aging, death, and dying" than it would have been around 1900, when so many died young, to talk about "youth, death, and dying" as if youth were the cause of death. As more people live longer, more people die when they are old, not necessarily because they are old. Medical doctors no longer use "old age" as a "cause of death," and instructional materials are outdated if they equate old age and death.

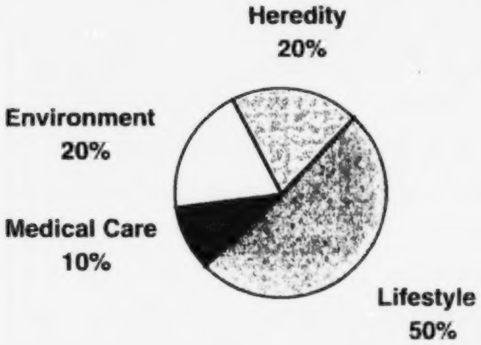
9. Most older adults maintain active, independent lives. Persons who are without serious complicating diseases or disabilities are able to carry out normal activities of daily living. In the United States over 90% of persons between the ages of 65 and 69 need no assistance with everyday activities, and more than half of persons age 85 and over still need no assistance with everyday activities. Normal aging permits continued daily functioning for satisfying, productive lives.

The great majority of older Americans live independently in their own homes and manage their own affairs. Less than 5% of people age 65 and over require long-term institutional care. The percentage increases with age, but even at age 85, the overwhelming majority, over 80%, are not living in institutions. Many who do require nursing home care, stay only temporarily during convalescence from surgery. When care is needed, it is most often provided by spouses or other family members, especially adult daughters. Community-based services, such as adult day services and home health care, also help make it possible for more older adults to maintain independent living. Keeping this information in mind will help educators provide classroom instruction and intergenerational activities that present a balanced, accurate picture for students.

10. Lifestyle choices influence the quality and length of our lives. People often think of aging as an inexorable process of decline that proceeds at its own pace—something that just happens, that one can do nothing about. Although lifestyle choices do not alter inherent biological aging processes, they greatly influence many age-associated conditions. For example, sedentary lifestyles can exacerbate arthritis symptoms. Years of smoking and poor diet can lead to heart disease. Exposure to loud noise, whether industrial or recreational, can result in hearing loss.

Of the key factors influencing how long we live beyond age 65, the Center for Disease Control estimates that about 50% is determined by lifestyle choices and only 20% is determined by heredity. (See Figure 2-6.) Medical care contributes a relatively small percentage to life expectancy. Other recent studies suggest that only 30% of physical aging can be attributed to genetic factors. Good health habits or lifestyle choices developed during youth and maintained through adulthood can influence longevity and health status more than any other single factor.

Figure 2-6. Factors Influencing a Person's Chance of Surviving to Age 65



Source: Brannigan, Rosalind P. and Rossman, Shelli B. *Health Promotion for Older Adults*, Health Resources and Services Administration, Public Health Services, 1990.

Choices people make about how they live are far more important than who their parents are. Factors such as nutrition, exercise, income, education, working conditions, and air and water quality can greatly affect how well and how long people live. For the vast majority of people, sound habits of mental and physical health, especially if adopted early, can improve lives. It is never too late, however, to make positive changes in health behaviors, if not to regain physical strength, then to slow decline. During later life, as in youth, attention to exercise and nutrition is essential to healthy aging.

11. The foundation for healthy aging is developed during youth. Planning for how long and how well we will live should not be delayed until old age. Planning should begin during youth. Health practices during youth influence health status during old age. Many health problems can be delayed or avoided with good early health behaviors. For example, calcium supplements may slow the progression of osteoporosis in later life, but how much better to avoid or delay the effects of osteoporosis by building strong bone mass during youth through exercise and nutrients. Similarly, atherosclerosis, the build-up of deposits inside arteries, can begin in childhood. The greatest potential impact on heart disease now is not a pharmaceutical breakthrough, but improving exercise and activity. Heart disease, the number one killer of older Americans, has been reduced by almost half in the United States since 1950, partly due to positive responses by younger and middle-aged persons to public education on the harm of smoking and high-fat diets. Continued gains in the fight against heart disease will depend in part on younger generations not putting their hearts at risk with poor health habits.

Many other health concerns common to later life, such as mobility and hearing decline, can also be altered by behavioral interventions beginning in youth. In order to improve health status and lower the costs of health care, younger generations must understand the personal implications of their health behavior for the length and quality of their lives.

Young people commonly view behaviors during youth as being inconsequential or disconnected to later life conditions. A lifespan approach to education will help young people see the relationship between the decisions they make now and their futures as healthy, active older adults.

Psychological Aspects of Aging

Like physical decline in later life, psychological decline is commonly attributed simply to growing old, without regard to more likely causal explanations. Popular generalizations typically overestimate the significance of chronological age on the intellect, personality, and emotional state of older adults.

Ageist attitudes among family and health professionals promote ideas that older people complain unnecessarily, cannot change, and that depression and memory decline are a natural part of growing old. Misinformation about the psychology of aging is common in the media, from cartoons to commercials. Such attitudes and misinformation can influence interactions between younger and older persons and limit opportunities for older persons to grow intellectually. Education of future generations of older adults can counter these outdated, inhibiting notions.

The following fundamental concepts are useful to all persons who interact with older adults. They are also essential concepts that can better prepare students for their later years in life. These concepts can be incorporated across disciplines and grade levels, but are especially appropriate for reading, science, health, business, social studies, physical education, family and consumer education, and vocational education courses.

1. Psychological well-being is interconnected with physical and social health. Good health and social supports are associated with psychological well-being, including memory, creativity, and positive emotions. Research on the physiology of the brain underscores the connection between our physical and psychological health. Physical deterioration at any age can lead to slower reactions, reduced activity, emotional distress, and lower life satisfaction. Loss of vision, hearing, or mobility can affect how older adults perceive themselves in relation to others and to their surroundings. At all ages, proper exercise and nutrition can enhance mental well-being. People with purposeful social activities, strong support networks, and good physical health usually have good mental health.

2. Significant memory loss is not normal aging. The once popular notion that declining mental skills were inevitable in later life has been overturned by longitudinal studies showing that cognitive functions do not decline in a substantial proportion of older persons. Although studies note age differences in the speed of information processing and in some memory recall, the wide variation in mental function among older adults, as with other age groups, suggests that characteristics other than chronological age explain differences among people.

Myths of memory loss with age generate unnecessary fears among older persons and their families. Human memory fails all of us regardless of age and intelligence. People of all ages forget names, dates, glasses, keys, and on and on. However, perceptions of normal forgetfulness varies by age. Younger adults usually dismiss their occasional forgetfulness as inconsequential. Middle-aged persons who forget something may jokingly blame their age, using a form of comic relief that is funny until one really is older. By late adulthood, what may only be normal memory lapses is often given unwarranted concern and interpreted as having prophetic significance as a sign of encroaching "senility."

Certain conditions and practices aid learning and memory. Young and old remember better with repetition or practice. If information is perceived as important, memory improves. Reducing distractions aids learning for 8- and 80-year-olds alike. The adage "use it or lose it" is valid at all ages. Just as school-aged children perform better at the end of the school year than after summer vacation, older persons who participate in activities with high memory demands do better than those who do not engage in mentally challenging activities. Older and younger persons can benefit from mental workouts. In the future, more older adults will probably seek memory aid devices and training to address their desire and ability to maintain strong, mental functions.

Ordinary forgetfulness is not the same as dementia, a mental impairment that affects multiple cognitive functions. Mental impairments can be caused by a number of physical complications including strokes, but probably the most common form of dementia is Alzheimer's Disease—a progressive, degenerative disease that attacks the brain and results in impaired memory, reason, judgment, language, and behavior. Although persons with dementia and their families face serious emotional, financial, and physical hardships, most older people never experience the cognitive impairment associated with it.

Many conditions other than Alzheimer's Disease can retard memory, such as inactivity, illness, sleep deprivation, low stimulation, poor health, illness, perceived irrelevancy of information, depression and other emotional distress, and the side-effects of medications. Regardless of one's age, concentration and memory tend to decline with such conditions. Older persons or their families who observe decline in mental function should not attribute it to "old age," but should seek medical attention and treatment.

3. Learning can be a life-long pursuit. Throughout life there is a steady growth of vocabulary, which is the primary vehicle for thinking. New information for older learners is connected with more extensive backgrounds of diverse life experiences. That older people can be active learners is evidenced by people in later life who successfully pursue high school and college degrees, join adult literacy programs, and learn how to use new communication technology. A lifetime of continuous growth and creativity is seen in the contributions of older artists, writers, musicians, scientists, explorers, statesmen, and philanthropists who receive national acclaim, and in the countless numbers of ordinary older persons whose personal growth contributes to their families and communities.

People at any life stage can develop new interests and further interests they already have. Although the rate of processing new information tends to be slower on average for older persons, normal aging does not prohibit mental growth, nor do changes in learning ability prohibit curiosity and ability to learn. While the time needed to learn may be longer for some, older persons can acquire new knowledge and skills. Older adults in good health and positive social environments can maintain similar levels of mental functioning as when they were younger. Lower expectations, lack of motivation, patronizing attitudes, and irrelevancy of new materials are greater inhibitors to learning in later life than is age-related decline.

Learning does not end after formal education during childhood and young adulthood. It can be a rewarding, lifelong endeavor. Living longer allows more time to develop new skills and knowledge, and a fast-changing world makes lifelong learning a necessity. The dramatic increases in Elderhostel and adult education programs are responses to the educational enrichment opportunities sought by growing numbers of older persons. Involvement in formal education programs in later life is related to the level of prior formal education. The higher the level of education, the more likely older persons are to participate in formal adult education programs. Future cohorts of older persons will have higher levels of formal education than past cohorts and may be more likely to pursue formal educational opportunities in later life. Additionally, informal education or learning from new experiences can be an ongoing part of life at all ages and is likely to be more important for older adults than formal learning.

4. Personality and adaptability do not change as a result of age. First, the personality and self-concept remain relatively stable throughout adult life. Longitudinal studies of personality traits reveal either no change or modest changes over time. Older people who are either easygoing or easily provoked most likely had these traits when they were younger. A crotchety old person was probably a crotchety young person. It can even be said that the older we are, the more we become who we are, as behavior patterns and coping strategies are practiced and reinforced. Individuals can work to change their typical behavioral responses, especially detrimental ones, but it does not happen automatically with time.

Similarly, older adults adapt to change as they have been doing for decades. People who have lived through most of the twentieth century have spent their whole lives learning and adapting to dramatic technological, political, social, and economic changes. People of all ages face changes in their lives that can be stressful and require adaptation related to families, friends, employment, health, and housing arrangements. The most taxing life events—the death of a spouse or friend and serious medical problems—are more prevalent among middle-aged and older persons and deserve empathetic consideration.

Ability to adapt depends less on one's age, than on one's appraisal and coping strategies. Both older and younger persons can be overwhelmed by relatively minor adaptational demands, while others seem to manage the most challenging life situations. Older people, like those in other age groups, use a variety of coping strategies to adapt to life changes and stress. They tend to rely on the kinds of coping strategies they practiced in earlier years, but will also vary coping strategies to suit the situation. Some are more apt to use passive, emotion-focused strategies such as avoidance, self-blame, or wishful thinking; others are apt to practice active, problem-focused strategies such as interacting with others, learning new skills, or seeking alternatives. Throughout adulthood, previous experiences, available resources, personality patterns, and adaptational demands influence a person's ability to adjust to change.

5. Wisdom is not automatic with age. It takes time to become wise, but time does not make one wise. Wisdom is associated with insight, judgment, and perspective. It includes the ability to apply lessons learned from previous experiences to new circumstances. Years of life give some persons more experiences to develop wisdom, but an abundance of years does not guarantee an accumulation of wisdom. Like other aspects of aging, chronology is a contributing, but not the deciding, factor. Other characteristics such as personality, intellect, personal resources, and life experiences account for why some persons gain wisdom and others do not. Qualities such as wisdom and maturity can happen earlier, later, or never in life. Some grow older and wiser; others grow older. Idealized glorification of older adults as wise, almost all-knowing, elders collapses when the belief does not match experience. Stereotypical images of the wise old sage are no more accurate than images of the forgetful old fool.

6. Most older persons are in good mental health. Depression and other brain disorders are not part of normal aging. Older adults are not any more likely than other age groups to experience psychological or emotional deterioration. Older adults who remain physically active and socially engaged in purposeful work are less vulnerable to emotional or psychological problems.

As with other ages, some older people are clinically depressed. Most are not. As noted earlier, physical health has a strong influence on mental health. Depression and anxiety are more common among persons with chronic diseases or disabilities, which explains why depression is more widespread among frail, older persons in medical and long-term care settings. Social and physical losses can contribute to decline in mental well-being. Physical limitations, including mobility or sensory loss, can increase social isolation and feelings of loneliness. A side-effect of many medications is altered sleeping, eating, and mood patterns. Increased dependency on others due to health decline is associated with guilt and depression. For some, losses of work status and financial security may contribute to depression.

Estimates of the prevalence of depression among older adults ranges from 5% to 20%. The highest suicide rate of all age groups is among white males, over age 80, with serious health decline. However, contrary to popular opinion, some research shows that major depressive disorder is more common in persons aged 18 to 44 than in persons over age 65. The increase of diagnosed depression among children, adolescents, and young adults raises concerns about cohort differences in mental health and the future mental health of younger cohorts as they age.

For people of all ages, persistent symptoms of depression deserve attention and treatment. Symptoms of depression—such as loss of appetite, lack of energy, and disturbed sleep—are likely to be identified for younger persons, but dismissed as "just old age" for older persons. In older persons, depression is often dismissed as a normal reaction to physical illness or adverse circumstances. Sadness, grief, and loss occur throughout life, but no one should feel sad all, or most, of the time.

7. Time perspective changes with age. Psychological shifts occur with age in how one conceptualizes time. To a child, another year to life seems like a significant time lapse. Yet, middle-aged and older adults will talk about "time flying" or "it seems like only yesterday." People around middle age begin to make the psychological shift from counting how long they have lived to counting how long they have left to live. Perceptions of time, how little or much we think we have, can also vary depending on the demands for our time. Young people who face long summer months without much activity, compared to full schedules during the school year, can understand relative time perspectives.

Psychological shifts in time perspectives can also partially explain differences in the meaning or importance younger and older persons give to events and circumstances. While young people are apt to perceive countless years ahead of them, older adults are more likely to perceive limited, numbered days, thus valuing time in ways younger people do not fully comprehend.

According to Erik Erikson's eight-stage model of human development, mid-life is characterized by efforts to contribute to younger generations, while later life focuses on efforts to achieve ego integrity. As older persons become more aware of the nearness of death, they attempt to reconcile a past that cannot be undone and a future with more limitations. Geriatric psychiatrist Robert Butler related developmental needs in later life to the practice of life review. Reminiscence can help persons reframe current physical limitations with the recall of past successes.

Although reminiscence can be valuable in later life, older adults probably spend less time thinking about the past than is commonly attributed to them. The perception that they talk about their past more than younger people may be less of a developmental characteristic than a reaction to how others direct conversations. Common conversational topics with older people, as in the case of oral histories, are about the past, rather than the present or future. Although time perspectives differ, both younger and older people think about the past, present, and future. Children, teenagers, and young adults reminisce about past friends, teachers, and experiences, but we typically do not label it as developmentally characteristic of them.

Schools can help students see that autobiographical writings, revisiting places of personal meaning, and discussing mementos can be purposeful activities from childhood on. Likewise, planning for the future is valuable, even essential, for people in earlier and later life.

Social Aspects of Aging

A practical education about life includes learning about how people of different ages have different living arrangements, social resources, and integration into social life. Like older people, young people are socially aware. They experience social norms and organizational rules that both restrict and enable them according to age, rather than ability or need. Similarities in social expectations between young and old shown in Table 2-4 can be the basis for practical instruction. Secondary students can especially relate experiences familiar to young people to those of some older people.

Table 2-4. Life Changes: Similarities between Young and Old

Younger and older people face similar social, physical, and economic pressures. Young people can put their own experiences in perspective and gain insight by considering the circumstances of some older persons.

Category	Teenagers/Young Adults	Older Adults
Transportation	Getting permission to drive; higher insurance rates	Told they should not drive; higher insurance rates
Work	Told they are too young/ inexperienced	Told they are too old/ too experienced; unfamiliar with new technology
Companionship	Single; dating issues	Single (widowed); dating
Income	Low-paying jobs	No income from earnings
Sex	Told they are too young	Told they are too old
Drugs	Use of "recreational" drugs	Misuse of prescription or over-the-counter drugs
Housing	Moving away from home; have to live with parents for economic reasons	Moving to smaller place; have to live with adult children for economic or health reasons
Friends	Friends moving away	Friends moving away or dying
Dependency	Parents tell them what to do	Adult children tell them what to do
Aging	Physical changes related to age	Physical changes related to age
Emotions	Occasional depression; feelings of hopelessness; sometimes leading to suicide	Occasional depression; feelings of hopelessness; sometimes leading to suicide
Time	Try to find meaningful ways to use time during school years	Try to find meaningful ways to use time during retirement years

Source: From classroom activity developed by Donna Couper, in *Schools in an Aging Society*, Connecticut Department of Education and Department on Aging, 1992.

Moreover, students recognize rapid cultural changes even within their short life experiences. They can talk first-hand about how their circumstances and social conditions growing up may be different from those of their older or younger siblings or cousins, and they are capable of relating these comparisons to how experiences of aging must have also changed over the years. The challenge for educators is to present the diversity and the fluidity of social aspects of aging across the lifespan. Knowledge and skills related to changing social trends in multigenerational families, such as grandparents raising grandchildren and elder caregiving, can be valuable inclusions to K–12 education. The following sociological concepts of aging are especially appropriate for infusion into health, language arts, science, social studies, and vocational education.

1. Older people are more diverse than any other age group. Diversity is the single most notable characteristic of older people. While human development follows a relatively common pattern in early childhood, development is more diverse in later years. The younger the person, the more predictable is his or her physical, social, and cognitive development. Older adults are more heterogeneous, with variations and combinations of interests, abilities, and backgrounds increasing their diversity over time. People grow old in many ways. People who are rich or poor, healthy or sick, conservative or liberal, honest or dishonest, happy or sad, all grow old. Thus, any statement that begins with "The elderly are . . ." is false. Some are; some are not. Such inadequate generalizations about "the elderly" conceal the diversity among older people.

The broad category of "older adults" can include persons as young as 50 or even 40, and as old as 100 or even 120. Generalizations that combine 55-year-olds and 75-year-olds are no more useful than generalizations that combine 5-year-olds and 25-year-olds, other than that the first group is older than the latter. A single broad classification for human development during later life is inadequate for a period that spans 40 or more years. Recognizing this, gerontologists have adopted divisions with shorter approximate age groupings. Categories sometimes used are: the "young-old" (age 50 to 60 or 64), "middle-old" (between 65 and 74), "old-old" (over age 75 or 80), and "oldest-old" (over 85). Another way of identifying older segments of the older adult population is defining people by specific age, such as octogenarians (age 80 to 90) and centenarians (age 100 or over). (See introduction to Demographic Aspects of Aging, page 23.) Category labels and the ages allotted to each are arbitrary, however, and their use depends on who uses it and for what purpose. Some businesses that market to older adults might target persons in their 50s and 60s. Social service agencies might limit their clientele to persons age 65 and over. Persons researching the needs of frail older adults might focus on the age 75-plus population. Researchers investigating longevity might focus on centenarians who have outlived most of their cohort.

Shorter chronological divisions acknowledge general physiological and cohort differences that exist among older adults of different ages, but still fail to account for the vast range of characteristics within each age classification. A combination of many factors helps define who we are as we age. It takes time to develop our unique personalities, interests, experiences, health status, family lives, occupations—but time (or age) does not make us who we are.

2. Each cohort of older adults brings its unique historical and cultural experiences with them as they age. People are products of their unique historical and personal experiences. Although diversity exists within different age cohorts, people born about the same time and in the same culture collectively share similar experiences and may develop similar attitudes and behaviors. Unlike its use in demography, in this context age cohorts are usually defined by significant historical events which shape public and individual opinions. The term generation is sometimes used interchangeably with cohort, although it is better applied within a familial context. Depending on the pace of change, an age cohort might span several decades, as those growing up during the Hundred Years' War or the American Colonial era. During the twentieth century, distinct cohort groups are increasingly being defined within shorter time spans—five- to twenty-year spans—as in the World War I generation, the Depression generation, the G.I. generation, Baby Boomers, and the more recently named Generation X. As these names suggest, cohorts are identified retrospectively according to their salient themes, events, or characteristics as they "came of age," or approached adulthood. Similarly, those graduating from high school after the year 2000, who are now sometimes referred to as the Baby Boomlet or Millennium Generation, will eventually be renamed with a title that reflects their coming-of-age experiences.

People tend to maintain core values and beliefs similar to those developed during late adolescence and early adulthood when the identity and self-concept are formed. While a complete spectrum of experiences and beliefs exists among individuals making up each age cohort, shifts in societal attitudes, beliefs, and values are evident historically. Thus, persons coming of age, or reaching adulthood, during the Depression or during World War II can collectively have different personal and world views than the Baby Boomers who came of age during the time of the first man on the moon and the Vietnam War, or the Generation Xers who came of age during the time of the Challenger explosion, Persian Gulf War, and prolonged, publicized court cases.

Cross-sectional research once supported the notion that as people grow older, they became more conservative, religious, and patriotic, since this characterized the older population of the time compared to younger people. However, later studies of age cohorts have found that these attitudes and behaviors are not developed as people age, but rather are carried through life from youth. For example, United States residents who grew up when the role of government was more limited, when more people attended worship services, and when the country was engaged in world war, in general, tended in later life to be more conservative, religious, and overtly patriotic than younger generations, who came of age when government, religion, and war were questioned. The age cohort that grew up with rock music and the Super Bowl are unlikely to transition in later life to Big Band and double headers. Similarly, the cohort growing up during the era of rap and extreme sports will carry with them beliefs and behaviors shaped by their world view as witnessed during their formative coming-of-age years.

In this sense, aging is like a multicultural experience with each cohort bringing their earlier cultural backgrounds with them as they grow older. (See section on Aging as a Diversity and Multicultural Issue, Chapter 3, page 77.) Although many aspects of culture are unchanged, evolving trends over time create noticeable cohort differences, as in the case of technology, fashion, vocabulary, music, consumer behavior, gender roles, and family composition. Although older adults continue to adapt to new situations over time, their reference point is founded during late adolescence and early adulthood when they personally begin to make more work and family decisions. Thus, the differences between younger and older people is not just a factor of humans progressing through different developmental life stages. Each age cohort redefines the meaning of aging with its unique historical and cultural experiences, building on experiences from previous cohorts and adding to experiences of future cohorts. Each cohort brings its attitudes and beliefs about family, work, education, government, religion, recreation, and entertainment with them as they age. In this respect, no cohort ages the same. This is why the values, needs, expectations, and orientations to life of older people fifty years from now will vary significantly from those of older people today.

3. Most retired people are socially engaged. Most older adults lead active, productive lives. They are involved in activities similar to those they had in younger years. Most are actively involved with their families and in community groups. Many are active as caregivers to spouses or other family members. As grandparents, older adults are the stabilizing influence in many families, providing varying degrees of financial and emotional support for their grandchildren. Others devote considerable time as volunteers through local service and religious organizations. Some volunteer through programs such as the Retired Senior Volunteer Program and the Service Corps of Retired Executives. Some pursue personal interests such as entertainment, travel, hobbies, or socializing with peers. Still others, for personal satisfaction or financial need, remain in the work force on a full-time, part-time, or temporary basis. Those who retire from employment are not retiring from life. They use their added discretionary time with purposeful, meaningful activities. When physical limitations increase, individuals often adapt to changes in the ways that permit continued valued activities.

Most older persons anticipate and plan for their retirement. Their planning includes addressing social, and financial, needs. Successful aging is more than having sufficient money and good health. Retirees need to adjust to losing the structure that employment gives and deciding how to use additional discretionary time. Young students might liken this somewhat to their need for planned, purposeful social activities during summer vacation after the structure of school. (See item 7 under Psychological Aspects of Aging, page 43.)

Purposeful activity that involves reciprocal, caring relationships helps people of all ages. The level of activity and social engagement during youth tends to carry into later life. Lonely, inactive, bored persons can be found at all ages and are not representative of most older people. Although few young people today have had the opportunity to think about it, they are laying the foundation for their retirement by the kinds of activities they choose now.

4. The roles, status, and norms of age groups vary among cultures. All societies use age as one way of classifying people and setting expectations for their behavior. In many small-scale societies, movement from one age-grade to another is marked by rites of passage and milestone events such as puberty, marriage, or birth of a child or grandchild—not by birthdays. Age stratification is defined more by functionality than chronological age. In such cultures, a person is considered "old" only when he or she becomes frail; while a functioning, contributing person would not be considered "old" regardless of his or her chronological age. In western cultures, the term "old" is associated with chronological age, with the implication that frailty is pending if not already present.

In bureaucratic, industrialized cultures, importance is given to age as a "calendar" concept. Chronological age, rather than ability or need, determines which people can attend school, drive, vote, drink, serve in the military, and collect pensions. Culturally defined notions of development stages create different expectations for infants, toddlers, children, teenagers, and young, middle-aged, and older adults. Age restrictions segregate people in schools, workplaces, organizations, housing complexes, and entire communities. Political and legislative actions—such as child labor laws, mandatory retirement, and social insurance programs—can result in changing age norms, just as changing norms can also be the basis of political and legislative action.

The role and status of different age groups varies considerably from one culture to another and throughout history. In some cultures, children may be expected to work and help support the family at early ages, while in others they are expected simply to play and be cared for. In traditional cultures, older people may be highly esteemed for assumed knowledge and wisdom. They may play important roles as elders of the village or tribe. In technological societies, older people are sometimes viewed as obsolete and "out-of-touch." Some may struggle to avoid involuntary disengagement from active roles in the workplace and community.

In recent years, less rigid timing of events related to school, work, and family has contributed to a blurring of age roles, especially in many western cultures. Age norms that define social boundaries of appropriate behavior are less well-defined than in previous historical periods. Six-year-old children and 60-year-old adults may wear clothes with similar styles. Older women are marrying younger men. Fourteen- and forty-year-olds are having their first child. Thirty- and 80-year-old women are having their first grandchildren. One person may retire at age 45, another at 75. Such wide variations in the timing of events within a culture can create diverse, and sometimes confusing, roles and expectations. Education can aid students in understanding how age, roles, and norms affect people across the lifespan.

5. Ageism is rooted in cultural beliefs that are learned. Beliefs and values that glorify youth, independence, and economic productivity breed ageism (age prejudice) and gerontophobia (fear of aging). Ageism translates into action in the forms of discrimination and patronizing behavior. Unlike racism and sexism, ageism is perpetuated by people who will with time be victims of their own ridicule.

No one is born ageist or gerontophobic. Like other forms of prejudice and anxieties, age prejudice and fear of aging are learned. Young people can relate to ageism, because they also face age prejudice and discrimination at home, school, and work. As early as age three, children begin to absorb the dominantly negative attitudes about growing old that are deeply embedded in our culture. Throughout our lives we learn that it is bad to be old. Our language is riddled with expressions that habitually exalt youth and degrade age: "She is young at heart." "He is seventy years young." "There is no fool like an old fool." Expressions like "old geezer," "old goat," and "getting senile" are considered humorous in birthday cards, comic strips, and situation comedies. Beauty treatment products extol youth over age. Such pervasive negative associations with old age are in sharp contrast to more positive expressions of aging that characterize many cultures, and even our own culture in the early days of the republic. The positive side of this is that what is learned can be "unlearned." Education is one means through which irrational prejudice and fear can be overcome.

6. Language reinforces stereotypes of older adults. Terms for older people are often used without much thought to the subtle but powerful differences in meanings. The children's rhyme, "Sticks and stones may break my bones, but words can never hurt me" is not true. Word choices convey and influence thoughts, feelings, and attitudes. For example, the terms *politician* and *statesman*, *cop* and *police officer*, or *children* and *kids* have similar denotations but different connotations. Similarly, students can be aware in their reading and writing of terms and expressions about older people.

Time and events, as well as context and manner of speech, change connotations of words. What is acceptable at one time and place is not in another. In recent United States history, for example, awareness of word connotations has led to increased sensitivity to terms for women and racial groups. Public consciousness of negative connotations led to general avoidance of terms like *girl*, *babe*, *colored*, and *Negro*, except under certain social circumstances. The cohort that grew up when language related to race and gender changed will expect similar sensitivity to how they are referred to in later life.

The increase in the older population is leading to increased sensitivity to what to call older people. However, trite expressions like *sweet old lady* still crop up in the media and everyday conversations. Many news writers lack good direction on how to avoid biased, inaccurate, and stereotypical reporting, as illustrated by the newspaper headline "Elderly in Car Accident" about two adults in their 50s. Although terms like *elderly*, *elders*, *aged*, and *senior citizens* are sometimes used interchangeably, they are not synonymous, but convey significantly different attitudes and images. Persons working within any business, public, or social environment need to be aware of how terms for older adults may be perceived.

The terms *old*, *aged*, and *aging* can have positive connotations when applied to inanimate objects, such as wine, cheese, furniture, but have negative connotations when applied to people. Individuals will go to great lengths not to look *old* or reveal their *age*. The terms are considered harsh, direct, derogatory. Instead of convincing an entire culture that *old*, as in *old man* or *old woman*, should convey beauty, strength, and character, it is easier to choose expressions that lack negative associations.

The words *elderly* and *aged* are often associated with social service and health programs, hospitals and nursing homes. They are sometimes used to elicit feelings of sympathy, and in many cases are used almost synonymously with *sickly*. As descriptive adjectives, as in *the elderly woman* or *the aged man*, they have different connotations than when it is used as nouns, as in *the elderly* or *the aged*. Using the words as nouns tends to place all older persons in a one-size-fits-all category, not to mention that using the adjectives *elderly* and *aged* as nouns is grammatically unorthodox. *The elderly* or *the aged* tends to imply a nameless, faceless, stereotyped population of poor, frail older people. Revised guidelines from the publication manual of the American Psychological Association states that using *elderly* as a noun is unacceptable and considered pejorative. In time, other respected writing manuals will no doubt update their guidelines to reflect changing language.

In contrast to *elderly*, the term *elder* suggests respect and wisdom, as in *respect your elders*. It is a term which is used less often, but may be growing in favor. However, *elder* is more often associated with males than females. Among some religions, the term refers to a church position. Some people think of *elder* in the context of specific cultural groups such as Native Americans. These limitations should be considered when using the term *elder*.

Senior citizen generally suggests a younger-aged population, although it is usually applied for all persons over a designated age, such as 50. People typically think of senior discounts and older persons engaged in group activity. While some people do not mind the term, others strongly object. *Senior* is a more relative term than senior citizen. It refers to persons who have more years of experience, but who are not necessarily older in years, such as seniors in high school or senior bank officers. Most prefer senior over senior citizens because it is associated less with a "discounts" mentality.

In the United States, the term *mature American* is sometimes used, although corresponding terms for other age groups (e.g., young Americans or middle-aged Americans) are seldom used. This term is geographically restrictive, and some older immigrants in the United States do not associate themselves with it. Geographers note the inaccuracy of using *American* to refer only to the United States, which is only one of several countries in North and South America.

Newer expressions like *golden ager* can bring mixed reviews. For some, the term connotes a carefree, fun-loving, older person. For others, it is a euphemism that glosses over difficulties that may arise in later life. The term can imply that older people are not to be taken seriously and their contributions are frivolous.

Older adult and *older persons* are neutral terms. *Older* is a relative expression, since everyone is older than someone else. The word *adult* connotes respect, independence, and responsibility. Younger people want to be treated as adults; so do older people. For these reasons, *older adult* or *older person* is now the preferred term for most public speaking and expository writing.

Behind the shifts in preferred word choice is a shift in society's understanding of age. Words may not break bones like sticks and stones, but they do influence our thinking.

7. The structure and dynamics of multigenerational families are changing. The worldwide trend of lower fertility and mortality has affected the shape and size of extended families that are comprised of more older adults and fewer children than in the past. In 1900, only 17% of children under age 15 had three or four living grandparents. Today, a great majority of young people have three or four living grandparents and some have a similar number of living great-grandparents. In 1990, more than 90% of all adults aged 65 and over with children were grandparents, and nearly half were great-grandparents. Just as education has adapted to other changing family considerations, such as single-parent and blended families, the demographic shifts in age structure will necessitate that education address the numerous social issues around changing multigenerational families.

Four- and five-generation families are becoming more common, exposing children to longer relationships with older persons than those experienced by their parents or grandparents. More parent-child and grandparent-grandchild relationships exist between two adults. Parents will know their children as grown adults two, three, or four times longer than they will know them as children. Grandparents are seeing the graying of their grandchildren. While the number of relations between generations are increasing, relationships within generations are decreasing. Fewer children in families results in fewer sibling relationships.

These structural changes affect relationships, dynamics, and social exchanges within families, including the extent and nature of care within families. A growing trend is grandparents taking care of their grandchildren. The 1990 U.S. Census reported that 3 million, or 5% of children, have grandparents as their primary caregivers. This trend holds across racial and socioeconomic groups, and is projected to increase over the coming decade.

Contrary to popular notions, families are not dumping their older relatives in nursing homes. Elder caregiving within families is increasing, as spouses, siblings, adult children, and grandchildren contribute to the social, emotional, and physical support of older relatives. The level of care provided by contemporary families ranges from occasional monitoring and supervision of services to daily care maintenance of feeding, dressing, and bathing. When care is needed, it is family and friends, not institutions, that are the primary givers of care. It is only after considerable financial, physical, and emotional costs that families turn to assisted living facilities or nursing home care. Elder caregiving roles may conflict with other work and family responsibilities, creating family turmoil over expectations and priorities. This is why adult children are referred to as the "sandwich generation," handling competing needs of dependent parents and children.

A foundation of attitudes and beliefs is formed during youth about what are appropriate generational roles and boundaries toward relatives needing care. This foundation becomes the standard for tomorrow's multigenerational caregiving families. Schools can give students a broader base of knowledge and understanding to prepare them for their probable future caregiving roles.

Political and Economic Aspects of Aging

Political and economic issues of aging affect persons of all ages. Public views of what is expected for and from younger and older citizens have changed and will continue to change in order to accommodate shifts in age structure. Societal attitudes of what are the rights, roles, and responsibilities of young and older persons to themselves and each other will be an ongoing theme over the coming decades. Concerns over generational fairness and reciprocity will be topics of conversations for families, businesses, and governments.

A lifespan approach to economic education is essential for young people so that they consider how persons of all age groups are affected by factors such as income and expenses, goods and services, supply and demand. Overall, economic and financial literacy is low among student and adult populations, so that public opinions about economic issues affecting young and old are based on limited knowledge of economics.

A lifespan approach to economic education can also affect personal financial planning. Financial knowledge learned during youth has been linked to increased savings during adulthood. Many adults now facing retirement age would like to have known earlier in life about such fundamentals as the power of compound interest and how pension plans work. By taking progressive steps in educational reform, teachers can give young people an advantage by providing such fundamental information.

Social Security and Medicare are notable government programs affecting virtually every family in the United States, yet young people lack critical knowledge about them. Lack of knowledge is partially behind the confusion and lack of confidence about the future of social insurance. The publication *Social Security in the USA*, which contains lesson plans for teachers, expressed the critical need to educate youth about social insurance this way:

> Increasingly, today's young will be asked to consider new directions concerning the future of Social Security and Medicare, the advisability of long-term care and national health insurance, and the stability of public employee retirement systems and the unemployment insurance system. . . . Young people need a better understanding of the protections these programs provide as well as of the obligations they entail. Further, they need a basic knowledge of how these programs work, including why they and/or their employers make payroll tax contributions, what happens to these contributions, and how they and their family benefit from these programs. More importantly, they need to understand the concepts behind social insurance programs so that, as participants in a democratic society, they can make informed decisions affecting the future of these programs and society. (page 3)

The notion that economic education is relevant only to the privileged is not true. In fact, the less money people have, the more important it is that they understand basic rules for managing money and maximizing what they have. Additionally, increased public attention on individual investments, including proposed provisions for individual investments of mandatory social security withholdings, means that beginning with their first full-time jobs, young people will need basic financial and investment skills. Schools will be expected to adapt their curriculum to changing political and economic policies as they impact individual finances.

Clearly, public policies focusing on older adults affect all young people now and in the future. The quality of one's later life is influenced by work preparation and consumer behavior beginning in youth. The following concepts related to the political and economic aspects of aging can be incorporated into math, business, social studies, technology, vocational education, and family and consumer science.

1. Financial status varies widely among older persons. Older adults are as diverse economically as they are in all other aspects of their lives. (See item 1 under Social Aspects of Aging, page 49.) Throughout history, some older people could expect wealth and leisure in old age, while others could expect to labor until it became physically impossible, and then become dependent on family or charity. Stereotypical images of older persons fluctuate from "those poor, old people" to "those wealthy, greedy geezers." Neither simplistic portrayal accurately reflects the circumstances of older persons. Shifts in how the public perceives the economic condition of older adults stems in part from using statistical averages that over the last several decades show a marked financial improvement for older adults.

However, percentages and economic averages do not reflect the financial diversity among older persons. The overall poverty rate for persons age 65 and over is about 12%, but when broken down further, large differences are found between the old-old and young-old. The current poverty rate for persons age 85 and over is approximately 20% as compared to 10% for the age 65 to 74 age group. (Other financial differences among gender, race, and ethnic groups are noted in the next item.)

No matter how much statistics are broken down by subgroups, they do not reflect individual differences. When the combined wealth of a 70-year-old person living near poverty, with only a $7,500 Social Security benefit, is averaged with another retiree who has a pension of $10,000, Social Security benefits of $15,000, and asset income of $20,000, their average does not reflect either person's financial reality.

2. Inequities of gender, race, and ethnicity persist into later life. People who grow up with fewer economic advantages have fewer resources on which to draw when they are older. Throughout their adult years, women and racial minorities in general have had lower living standards and socio-economic status than white males.

In spite of advances in gender equity, women are still more likely to be paid less than men and less likely to be promoted or to hold higher paid leadership positions. This is especially true of the current cohort of older women whose work experience was completed prior to the movement for gender pay equity. In the United States, older women are currently twice as likely as older men to live at or below the poverty threshold, 15% compared to 7%. While the overall poverty rate for persons age 65 and over is currently about 12%, the rate for widowed females is 21% compared to about 5% for older married males. Lower incomes and often shorter, interrupted work histories of women translate into minimum retirement returns from Social Security. Because women on average outlive men by several years, their retirement resources must last longer. The proportion of women in the rapidly increasing population 85 and over increases concern about gender discrepancies in economic status in later life. (See item 4 under Demographic Aspects of Aging, page 23.)

Racial and ethnic minorities, especially African-Americans, Hispanic-Americans, and Native Americans, are more likely to be under- or unemployed during their adult years. Furthermore, social inequities in education, income, and occupational status contribute to differences in accumulated net wealth among racial and ethnic groups in later life. People who struggle daily to "make ends meet" are less likely to save for retirement and more likely to rely solely on Social Security. Almost one-third (31%) of black and one-fourth (25%) of Hispanic older females live in poverty, compared to a poverty rate of about 14% for older white females. The highest poverty rate in the United States is among older black females, a result of what has been referred to as "triple jeopardy"—old, black, and female.

3. Economic health in later life relates to financial conditions across the life course. Persons in their late 50s and 60s today grew up during a period of rapid wage growth, a booming housing market, and a growing stock market. Their life course experiences should lead to retirement years in better financial shape than cohorts that preceded them, and possibly better than those following them. The relative financial security of this post-Depression, pre-baby boom cohort stemmed as much from fortuitous developments as from planning and saving. They benefited from socio-economic factors influencing education, employment, and income patterns across their life course. Developments favorable to this cohort of older persons included: (1) increase in real Social Security benefits during the 1970s with the Cost of Living Adjustments (COLAs), (2) improved private pension benefits for many, and (3) increase in the price of housing, making their current housing value worth significantly more than their purchase price. Thus, the general economic health of older persons improved over the past three decades. In 1970, 25% of persons 65 years old and over were below the poverty level. By 1990, the poverty rate had dropped to about 12%. Although the trend may change, persons who turned 65 in the last decade had higher average incomes and wealth than previous older cohorts.

While poverty rates among older people in the United States steadily declined since 1970, those of children, as measured by the incomes of families with children, increased so that a larger proportion of children (than older adults) lived in poverty. About twice as many children (persons under age 18) as older adults (age 65 and over) in the United States currently live below the poverty level. (See Table 2-5.) A pattern of lower economic well-being among children may result in increased economic vulnerability as younger cohorts age.

Table. 2-5. Persons Below Poverty Level,
by Age, 1993

Age	Percent
Under 18	23
18 – 24	19
25 – 34	14
35 – 44	11
45 – 54	9
55 – 64	10
65 plus	12

Source: U.S. Bureau of the Census, Current Population Reports, P60-188, in *Statistical Abstract of the United States 1995*, Table 747.

Current employment trends of part-time work and reduced pensions, if sustained, may also adversely affect the long-term financial status of older persons. These negative indicators are countered opposing trends such as the increase in two-earner families which may eventually result in more pension and Social Security benefits for households than for previous cohorts.

Economic difficulties related to inflation, employment opportunities, and cost of living can occur at any time and can affect people differently depending on where they are in the life course. Because financial conditions are not static, we cannot predict the economic circumstances of future older cohorts with assurance. We can say with confidence that the overall financial prospects for young people today as they enter old age will depend on their income experiences across their life course and on future public policies that affect income maintenance, such as any changes in Social Security and pension benefits. Understanding these dynamics will help young people make realistic assessments of the larger economic picture influencing their lives. As in the past, changes in the financial health of future cohorts of older adults will correspond to changes in economic indicators and public policies that affect the income and wealth of populations.

4. Early planning and saving strengthen economic health in later life. Fiscal responsibility can begin during young adulthood. People who plan early and accomplish personal financial goals over time are generally in better economic health than those who postpone thinking and making decisions. Financial status directly relates to income, personal financial decisions, and macro-economic forces such as housing, employment, and global market conditions. While macro forces, including entrenched poverty conditions for some, are beyond individual control, people do exercise control over personal money decisions. Given the constraint of income over one's working life, one difference between older adults who are in financial need and those with a "comfortable" income is their saving, investing, and spending habits through adulthood. The earlier persons begin to save and invest, even nominal amounts, the more likely they will have accumulated wealth to draw on later.

Planning for one's economic future includes consideration of such factors as life expectancy, inflation adjustments, public policy changes, and economic trends. For example, existing and proposed changes in Social Security (e.g., starting benefits at an older age and changing the amount of benefits subjected to federal income tax) are important considerations for young people who will need to save early in their income-producing years. If the trends toward earlier retirement and longer life expectancy were to continue, more persons would live in retirement than in their working years, which would also increase the need for young people to prepare financially for the later years. Thus, economic education including knowledge and skills about savings and spending habits can benefit persons of all income groups at any age.

5. Income sources and financial needs change in later life. Financial status in later life depends less on earnings and more on Social Security benefits, asset income, and occupational pensions. In later adulthood, income is a less reliable measure of financial status than is overall wealth. The financial status of younger adults is closely related to annual earnings income; in later life, however the accumulation of wealth that has occurred through savings and investments largely determines financial status. In retirement when earnings fall or end, income from other sources is important. In 1992, for persons in the United States age 65 and above in the lowest income quintile, Social Security represented over 80% of their sources of income. In such cases, Social Security provides a safety net for persons with low incomes. In contrast, Social Security benefits represented only 20% of income for older adults in the highest income quintile. The financial advantage of those in the highest quintile is the result of their significant wealth accumulation.

In addition to income sources, patterns of expenditure vary by age and income group. Retirees' expenses for purchases such as housing, clothing, and transportation can generally be less than for those in the work force, but health care costs generally increase with age. (See Table 2-6.)

Table 2-6. Average Annual Expenditures, by Age of Householder, 1993

Item	Under 25	25–34	35–44	45–54	55–64	65 plus
Housing	$5,300	$9,700	$12,000	$12,000	$9,700	$6,900
Food	2,600	4,200	5,400	5,500	4,600	3,200
Clothing	1,200	1,800	2,100	2,200	1,700	1,000
Transportation	3,900	5,100	6,600	7,500	6,300	3,100
Entertainment	910	1,500	2,100	2,500	1,500	900
Education, Reading	1,000	400	600	1,300	400	300
Contributions	100	500	800	1,500	1,300	1,300
Health Care	300	1,100	1,700	1,800	2,200	2,700

Rounded to the nearest 100s.
Source. U.S. Bureau of Labor Statistics, Consumer Expenditures in 1993, in US. Bureau of the Census, *Statistical Abstract of the United States*, Table 718, 1995.

Compared to younger people, older people generally spend a larger portion of their incomes on health care—hospitalization, prescriptions, and medical care. That health care costs have escalated in recent years more than overall inflation means that older adults have been disproportionately affected. Health care costs can threaten the financial security of persons of all ages, but older persons are more vulnerable. The rising health care needs of an aging population, together with increased utilization of health services in the general population, may lead to continued growth in the health care industry.

Understanding how personal expenditures can change over time can help youths evaluate their personal spending patterns, appreciate the financial decisions of older family members, and make informed financial decisions as adults. Children can begin at early ages to consider their spending.

6. Population aging affects economic decisions and public policies. The graying of a population changes the way people live. It has direct implications for the labor market, health care, medical research, education, recreation, families, and virtually every other aspect of society. The economic implications are found in all aspects of business, from products to services, from employees to consumers. Consider the increased demand for senior housing and geriatric services. In highly developed countries like the United States, fewer workers must support more retirees. At the same time, retirements create openings for jobs and promotions.

Worldwide, governments throughout the world wrestle with complex public policy issues stemming from population aging. The Singapore government encourages multigenerational family caregiving by promoting public housing for extended families and by giving financial incentives to younger people who buy apartments close to their parents. In contrast, some communities in the United States whose zoning regulations prohibit add-on apartments to single family houses may inhibit shared housing among multigenerational family members. In an effort to control general population growth with its one-child policy, China has increased the proportion of older persons in its population. This policy could over time create families with one child responsible for four older grandparents and two parents, which will almost certainly require increasing public financial support for older persons. Even now, many countries are struggling with the funding and benefits of their old age social security systems.

In the United States, population aging changes the dynamics among those who have and those who need. Local, state, and national governments make decisions for the allocation of goods and services that benefit people of different ages and needs. Consequently, the perceptions and claims of the needs of various groups are debated in the political arena, which leads to public policies that modify normal market supply and demand forces. Medicare, Supplemental Security Income, Food Stamps, Head Start, school breakfast and lunch programs, and Aid to Dependent Children are examples of efforts to provide for needs that often compete for governmental appropriations.

7. Public policies affect the well-being of older adults. Although public policies have by no means eliminated poverty among older adults in the United States and other western countries, they have improved the quality of life for many older people. Not too long ago, older people had the highest poverty rate of all age groups. Today, old age is no longer synonymous with poverty and dependency. Social Security, together with an increase in private pensions and growth of personal savings and home ownership, has meant that more people can retire with a livable income. Future political and economic conditions will affect the well-being of today's younger cohorts as they grow older. In addition to ongoing debate over existing public programs are other policy decisions about such issues as long-term care, nursing home coverage, and how much to fund research on aging. Decisions to reduce or expand existing public programs, or to create new public policies, will affect future older cohorts.

Young people who are forming opinions and will be making political decisions need to understand the history, purpose, and effects of public programs benefiting older persons, most notably social insurance programs. These programs originated in Germany in the 1880s and were eventually adopted in the United States in 1935. The number of countries with some form of government program for old age, disability, and survivors has more than quadrupled since 1940.

Like other countries, the United States' national social insurance system evolved over several years to protect wage-earners and their dependents from the loss of household income because of disability, old age, or death. Social Security in the United States, officially known as Old Age, Survivors, and Disability Insurance (OASDI), is a government-sponsored, compulsory, independently financed program to which employers (including self-employed persons) and employees contribute. The program pays benefits when a person retires, becomes disabled, or dies. Social Security can be viewed as a contract that people have with the government and between generations. Benefits under OASDI should not be confused with Supplemental Security Income (SSI), also administered by the Social Security Administration, which is a social welfare program that assists low income persons who are aged, disabled, or blind.

In the decades following the payment of the first Social Security retirement benefit in 1940, coverage was broadened to include many new categories of workers, such as farmers, domestic servants, and the self-employed. Certain public employees, such as some teachers, may not be covered by Social Security if their state or local governments voted to be exempt, although legislative proposals are seeking to change current exemptions. Legislation in 1972 created automatic increases in Social Security benefits tied to the rate of inflation, known as COLAs (cost of living adjustments). During the 1990s the concern for Social Security has centered on the problems that result from the baby boom cohort entering the age of eligibility for benefits. This led to the 1983 change in the eligibility age so that a person born after 1960 must be 67 instead of 65 to receive full Social Security benefits. Future amendments to the Social Security system, such as changes in eligibility and contributions, are relevant to people of all ages.

Other public programs that benefit older adults today emerged during the mid-1960s era of the "War on Poverty" and "Great Society." These included the Older Americans Act, Medicare, and Medicaid. The Older Americans Act of 1965 laid the foundation for community services for older adults through state units on aging, and geographic service areas in states known as Area Agencies on Aging. Medicare, a federally funded and directed program, provides health insurance for persons over 65. Medicare Part A, financed through a tax paid by employers, covers short-term hospital stays and a restricted amount of skilled nursing care and home health care services. Older adults pay monthly premiums for Medicare Part B, which covers some physician and medical services. Medicare assists older persons, who are more likely to have significant health care costs than younger persons, and who are more likely to be affected by escalating medical care costs than other age groups. (See item 5 on financial needs in later life under this section, page 64.) The current working population covers much of the medical costs of the older retired population through compulsory employee and employer contributions. Medicaid, a federal-state program, covers health costs for poor persons of all ages. Various other public programs benefiting older adults (and indirectly their families) offer support, such as subsidized housing, transportation, senior centers, meals-on-wheels, and veterans' benefits.

8. Public programs for older adults affect the well-being of younger people. Young people have a vested interest in programs for older adults. First, when they are older, these programs will serve them. Second, without these programs, young and middle-aged persons would have to devote more resources to the support of older family members, and for public assistance programs, private insurance, and pension programs. Programs such as Social Security and Medicare affect everyone, either directly or indirectly. Young people, and their parents and teachers, need more than headlines and sound bytes to make informed opinions about the fairness and viability of such programs. They need to understand why "so much" money is deducted from their paychecks when they begin working and how they, too, can benefit now and in the future. The solvency of Social Security and Medicare programs will continue to be debated with questions raised about the benefits for future older cohorts. Rapidly rising costs of health care and growing numbers of persons reaching the age of eligibility have raised growing concern about their sustainability. Unfortunately, legitimate concern for the ongoing viability of these programs has led to an oversimplification of the issues and often to an "us versus them" approach that has overshadowed consideration of intergenerational benefits of such programs.

Although reductions in benefits for older adults could reduce the fiscal responsibility of younger persons toward older persons at the societal level, it could increase the responsibility at the individual level. For example, although Medicare is targeted to older persons, it also benefits younger family members, who have fewer worries about having to cover the costs of illness for older relatives. While Medicare protects older adults from much of the financial burden of acute care and rehabilitation needs, it also protects middle-aged and young adults who can use more of their financial resources for education, housing, children, and personal needs.

In the absence of social insurance programs, taxpayers would undoubtedly be supporting millions of retired older people through public assistance welfare programs. About half of all older persons over age 65 would be in poverty without Social Security income. One can easily imagine what the financial impact would be if all of the families in the country suddenly found themselves directly responsible for relatives who have lost income through death, disability, or retirement.

Many young people benefit from OASDI in another way. As the official name for Social Security (OASDI) suggests, the program includes insurance for disability (D) and for survivors (S) which benefits young and middle-aged persons. While most of the funds received by Social Security go into payment to retirees and their spouses, it also insures workers and their families throughout their earning years against loss of income from death and disability. Families are spared poverty due to permanent or long-term loss of income. Millions of children of deceased workers and families of disabled younger and middle-aged adults depend on income from Social Security.

Another indirect benefit to younger generations that is seldom recognized is the impact of Social Security on the labor market. In fact, reducing the labor market was one motivation for the passage of a social insurance policy following high unemployment during the Great Depression of the 1930s. Without Social Security to supplement other income and savings, vast numbers of today's retirees simply could not afford to retire. They would need to remain in the work force and compete with younger job seekers. Their retirement, in effect, reduces the labor pool, which tends to push up wage levels and create jobs and promotion opportunities. Even so, changing economic and employment patterns may lead to policies that encourage future cohorts of older persons to remain in the labor market longer, which in turn may affect young cohorts.

9. Perceptions of retirement changes with economic conditions. Retirement, once perceived as undesirable, is now desired by most workers, especially in highly developed countries. When the United States had a basically agrarian economy, having children was the informal security that kept older persons out of the poorhouses. The industrial revolution and growth of the market economy produced drastic changes. Fewer people worked and lived on farms, and more worked for others and rented their homes. Saving for retirement was difficult, pensions were uncommon, and Social Security was unknown. Retirement was not an expected life stage. Most people of the working class simply worked as long as they could, and when forced to quit became the responsibility of families, charitable organizations, and the community. Retirement for some meant the county almshouse or poor farm. Many people simply worked until they died, which might be before or after age 65. Retirement as we know it now was not even contemplated by most workers.

For the current older cohort, however, retirement became an expected transition. Large corporations and governmental units established compulsory retirement as a structured mechanism to allow younger workers to advance. A prosperous economy, the establishment of Social Security, and the availability of pensions made it attractive to retire. More people could over their lifetimes purchase homes on long-term mortgages, accumulate savings, anticipate pension and/or social security benefits, and choose to retire.

People now choose to retire at different ages for a variety of reasons. Some view it as an alternative to being laid off. Some leave work for health reasons. Commitment, working conditions, and work satisfaction also influence when persons retire. Financial considerations and health status are the most important factors influencing when a person retires. Most people now retire before age 65, the current age for full Social Security benefits.

Attitudinal shifts about work and retirement will continue to take place. Longer, healthier lives will allow persons to remain employed longer, if they so choose and have the opportunity. Changes in the normal retirement age for Social Security eligibility from age 65 to 67 for those born after 1960 will delay retirement in the future, as previously noted. Further adjustments could increase the age of eligibility even more. Current trends in employee pension benefits will affect future retirement. While the percentage of people with employee pension benefits has increased over the last several decades, the value of pensions is declining overall. Pensions vary greatly based on work tenure, earnings, and the specifics of the individual pension plans. Public perceptions of retirement may be different for people growing up in an economic environment of part-time workers and company outsourcing, where pension plans and health insurance may not exist or are reduced, and where employees change jobs several times, thus not building up adequate years at any one company for pension benefits. However, if corporations experience labor shortages, they may begin offering phased or flexible retirement options that will allow future older workers a slower transition from full employment to no employment. Future trends may see multiple retirements as persons leave one job only to start another.

Retirement trends affect young people now and in the future. As a society, we cannot afford to postpone discussing retirement issues until persons are almost there. Although we cannot control the factors influencing the retirement decisions of future generations, we can at least educate young people so that they have some idea of what to expect, what are the options, and how best to plan.

10. Older persons sometimes face age discrimination in the workplace. The Age Discrimination in Employment Act (ADEA) was designed to protect employees over the age of 40 from employment discrimination. Mandatory retirement age for most federal employees has been abolished except in jobs where age is considered a factor in ability to work. However, hiring, rehiring, and layoff patterns can suggest job-related discrimination. Age discrimination cases, although still less common than gender and race discrimination cases, are growing at a faster rate. The marked increase in complaints filed under the ADEA over the past decade suggests the need for greater public awareness about legal and ethical responsibilities to middle-aged and older workers. Young people will be working with older adults as their supervisors, co-workers, and subordinates. Those who are informed about aging and avoid discrimination on the basis of age will be more effective employees, supervisors and managers.

Between ages 40 and 65, age-related developments such as sensory changes are unlikely to inhibit employee performance. Unfortunately, age can become the excuse or blame for middle-aged and older worker performance, even though boredom, health or family problems, lack of training, or a history of poor work habits are more likely to be the explanation. Older workers, like younger workers, vary in skills, abilities, and attitudes. Advanced age is not synonymous with inability.

What prevents many older workers from job performance opportunities are negative expectations from others. The notions that older workers are generally less efficient, creative, and dependable, and are more prone to accidents and illnesses can inhibit their opportunities, but these notions are not valid. The overall attendance records of workers over age 65 are equal to or better than those of most other age groups. They generally have fewer, and less serious, workplace accidents than younger workers. Loyalty and personal pride in their work are characteristic attitudes of the current older employees. For many jobs, older workers perform as well as younger workers and maintain satisfactory production rates by being more consistent and regular. Older persons in good health can learn new knowledge and skills, including the use of new technology. Chronological age is not a reliable criterion for determining who are the best workers; individual traits and abilities are far more important.

11. Population aging confronts society with difficult ethical choices. Young people will face more difficult aging-related ethical choices over their lifetimes. Continuous development of new medical technology, combined with the conflict between spiraling medical costs and limited resources, raises complex questions about who should receive expensive medical treatment and for how long. We may be capable of doing more than we are willing to pay for. As the numbers of older people requiring expensive medical care grows, society must decide how much of its resources will be devoted to meeting their needs.

When chances of recovery are slim, how long should people be kept on life support systems? Who should make these decisions? Medical professionals, family members, or older patients? What priorities should be set for deciding which people receive scarce organs for transplant? Is it justifiable to use implants of fetal brain tissue if the procedure can effectively treat Parkinson's or Alzheimer's Diseases? Should health care be rationed, and if so, how? Should ability to pay determine the extent of care? Should death be prevented at all costs? Should health care be restricted for persons based on their age?

Medical advances that keep more people alive from birth to later life will also create a larger disabled population. Guidelines for resource allocation that could be used against older persons could also apply adversely to younger persons. For example, if usefulness or functionality is used to determine the extent of care allocated for older patients, then would we allow the same criteria to be used for younger persons who become disabled? If life expectancy were used as a factor in determining life-sustaining treatment, say in the case of an 80-year-old person with a life expectancy of 8 years with successful treatment, would the same decision-making processes be applied to an ill young person whose life expectancy with treatment was only a few years? What if long-term personal, emotional, and financial costs were used in deciding medical treatment for older persons? Would the same principles be applied, say, to postnatal intensive care associated with severe mental or physical disabilities, requiring years or possibly decades of special services? These are just some of the difficult choices that young people will have in the future as voters, professionals, and family members.

13. Population aging creates new business and career opportunities. Gerber Foods no longer claims that "Babies Are Our Business—Our *Only* Business." Like many businesses in an aging society, Gerber has diversified into other products and services to meet the needs of middle-aged and older consumers. As more older persons enter retirement with better health and more disposable income, they are potential buyers of countless goods and services. Older consumers are no longer a fringe market. Collectively they have enormous purchasing power. Their numbers require that the production of goods and services be designed and marketed to respond to their wants and needs. The graying of America creates a need for people educated about gerontology and geriatrics in such fields as health and human services. But in addition to those who serve older people in medical or social service settings, there is a broader need for people who can apply basic knowledge of aging to retailing, entertainment, travel, food service, education, physical fitness, transportation, housing, banking, insurance, and other services in which older people are served as part of the general population. More people with knowledge of aging are needed to teach older learners, to set up and monitor exercise programs for older people, to design homes and public buildings that meet the needs of people with changing physical abilities, and to prepare menus suited to special dietary and nutritional needs of older adults. The longevity revolution has opened a broad range of possibilities for both those in the labor market and those who operate businesses.

Students who understand these basic concepts will be better prepared as adults. All of the concepts are interrelated and cannot be taught as single, stand-alone concepts in isolated sections of one or two subjects. Rather, they need to be appropriately integrated across disciplines and grade levels. This challenge to developers of curriculum and instructional materials is the subject of the next chapter.

Chapter 3

How Should Content on Aging Be Presented?

As with other matters in which social attitudes and personal feelings are involved, the manner in which aging and later life topics are examined is as important as what information is presented. A practical issue is how to infuse new content without making materials overly long and without compromising existing important educational objectives. This section offers practical guidelines for addressing these questions.

Infusion Models for Education about Aging

Strategies for multicultural and diversity education serve as models for how education about aging is best approached. Rather than another "add-on," or chapter at the end of the book, or extra course, aging-related topics can be integrated across disciplines and grade levels by taking an interdisciplinary, lifespan approach. In an era of information overload, developers of curriculum and instructional materials must make reasonable decisions about what information is most valuable and necessary for living in the twenty-first century.

Aging as a Diversity and Multicultural Issue

An important goal of education is to instill an appreciation for the diversity of human experiences. Over the last several decades, curriculum, instructional materials, and teaching practices have changed in order to address the challenges and opportunities of living in a diverse society. Educators are more likely today to present diversity among races, religions, and ethnic groups as a cause for celebrations for the richness of experiences each contributes. Students learn different ways people from varying cultural backgrounds view the world. As we approach a time when there will be no majority racial group in the United States, diversity and multicultural education is not just about being nice to one another; it is essential for functioning in a changing society.

Appreciation of human diversity rightfully includes how to understand people born at different times or historical periods. Yet the diversity issue least likely to be addressed in today's schools is aging, even though diversity is a fundamental characteristic of aging. Age diversity offers the richest variations in experiences and cuts across other social classifications, such as gender, race, ethnicity, and social class. The older we become, the more different we are, as we create our own unique combinations of backgrounds, interests, and abilities. In spite of the increased diversity in later life, older adults are often falsely lumped together as one homogenous group. This fallacy can be corrected by presenting the diversity within and among age groups in curriculum and instructional materials, just as other diversity issues are.

Multicultural education sometimes addresses age factors in terms of differences between foreign-born immigrants and their native-born offspring. However, for the first time in history, rapidly changing events and social trends are contributing to what amounts to cultural differences among people of different ages who otherwise share similar backgrounds. The accelerated pace of change has resulted in people of different ages having significantly different life experiences and perceptions. The dynamics of normal human development plus rapidly changing social trends are creating notable generational or cohort distinctions. Generations in the same families growing up in this century are characterized by observable cultural differences. Rapidly changing technological advances and social trends mean that people growing up in different, relatively short, periods of time have vastly different experiences, even within the same family, same ethnic group, and same country. People within the same household are coming of age with different music, art, literature, heroes, vocabulary, beliefs, values, and major life experiences. In effect, people of different age groups now have different cultural experiences.

These dramatic, fast-paced changes have led to the identification of distinct cohort differences. (See item 2 under Social Aspects of Aging, Chapter 2, page 78.) In a rapidly changing world, each succeeding generation or cohort can share experiences as different from other generations as there are differences among ethnic cultures. Young people are acquiring knowledge today that was not available only a few years ago. Cohort differences are reinforced in an information age where transfers of knowledge increasingly originate with younger persons, rather than traditional transfers from older to younger persons.

Viewing aging as a diversity or multicultural concept is not new. One of the earliest publications of aging for educators was produced by an organization with nationally known experts in multicultural education serving on its advisory board. In 1976, the Council on Interracial Books for Children chose "Ageism in Children's Books" as the theme of a special issue of its journal. The National Association for Multicultural Education includes age, along with culture, race, gender, language, ethnicity, and exceptionality in its mission statement to promote cultural pluralism and equity. Age is recognized as an appropriate area for multicultural education, making it an exciting area for research and development.

Educators can assist young people in understanding cultural differences among and within different age groups by infusing aging-related issues into curriculum and instructional materials, just as they incorporate other diversity and multicultural topics.

An Interdisciplinary, Lifespan Approach

A lifespan approach to education does not require additional topics, but does require that topics be discussed as they relate throughout one's life. When health teachers cover tobacco, alcohol, and substance abuse, for example, young people should not be singled out as the only ones who are affected. When elementary teachers teach about the community, a natural inclusion would be information about and experiences with older residents and what they like and do in the community. When social studies teachers cover voting practices, they would be remiss if they did not include age and cohort differences in voting patterns. When language arts teachers encourage students to consider age and development differences in literary characters, they are enhancing students' analytical skills. Life does not end at 21, nor should it in classroom instruction. (See Appendix C, Sample Classroom Activities.)

One step toward accomplishing the goal of developing a lifespan approach to subjects is to review current curriculum guidelines and look for natural places to promote a lifespan perspective. Curriculum developers at the state and local levels are beginning to make substantive changes that lay the foundation for lifespan education. For example, the 1997-adopted Texas Essential Knowledge and Skills (TEKS) guidelines inserted lifespan phrasing throughout the objectives in several disciplines, such as "across the lifespan," "age diversity," "for people of all ages." Below are some examples from TEKS guidelines with key words and phrases italicized:

> Business: "[Explain] the impact of multiculturalism and *multigenerationalism* on retailing activities."
>
> Geography: "Describe the structure of the population . . . using demographic concepts such as growth rate and *age distribution*."
>
> Health Science: "[Identify] the concepts of health and wellness *through the life span*." "[Understand] that personal health decisions and behaviors affect health *throughout the life span*."
>
> Home Economics: "[Explain] the interdependence of family members *across the life span*." "[Implement] strategies which promote positive parent-child *relationships across the life span*."

Where aging is not specifically identified in curriculum guidelines, instructional materials related to aging could still naturally be included. Young people can simultaneously learn about aging and improve their skills in reading, writing, listening, speaking, analyzing, problem-solving, basic math, and computer science. Population aging would rightfully be included under a business education requirement that students "[evaluate] the relationship of population migration, cultural diversity, and family demographics." Aging-related content would be most appropriate when developing social studies skills at the elementary level to "create visual and written material including pictures, maps, timelines, and graphs." Information about the civil rights movement in the United States could include legislation against discrimination on the basis of age as well as gender and race. Any course—history, art, music—that considers cultural differences could naturally include age cohort differences.

Although infusing aging concepts across disciplines and covering topics from a lifespan perspective involves change and work, it is often a task of substituting rather than adding. Age-stereotypic literature can be replaced with non-ageist literature. Math problems can be constructed around age demographics and changing life expectancy as easily as they can around miles per gallon and the distance to the moon. Aging-related topics can be interesting and relevant for student discussions or writing assignments. Aging education is not an either/or question. All teachers can develop interesting and relevant activities that address their existing curriculum objectives and also prepare their students for a changing and aging society.

Making Reasonable Decisions about Content

For instructional materials, especially textbooks, decisions must be made on how new content on aging can be added without making materials overly long or minimizing other important content. Updating United States history textbooks has sometimes meant adding pages to cover a new presidential term or other historical developments. Updating biology textbooks has meant adding more material that summarizes important new scientific theories or findings. Sometimes when a particular theme, like ecology or career education, has come into vogue, revisions take the form of adding special supplements or feature pages to existing units. However, revised and expanded editions cannot go on forever. Eventually, the volume of material exceeds cost limits and becomes unwieldy for classroom use. Faced with more to teach, teachers complain that there is too much to cover. Choices have to be made, prioritizing what to include.

As experienced textbook authors and editors know, if new content is not going to be added, the alternative is to substitute new content. Some facts and information, although traditionally included, are not essential to a child's education. We may have more non-essential information than we care to admit. In 1990 the Commission on Life Sciences of the National Research Council formed a distinguished committee of scientists and educators to examine the teaching of biology in American schools. The big questions were why biology education at the secondary level was ineffective and why so many young people avoided the subject. The committee's report sharply criticized the typical biology curriculum because it was overloaded with trivia and irrelevant to the lives of students. They questioned the practice of drowning students in rote memorization of obscure terms and esoteric facts. They recommended that the quantity of information presented be drastically reduced in favor of a focus on a limited number of important concepts that students would find interesting and relevant to life. Aging education fits this recommendation and also conforms to a recommendation of the American Association for the Advancement of Science. This group identified aging as an important topic for biology education, calling the aging process a critical component in understanding the life cycle of the human organism.

If blue ribbon committees were formed to review other subject areas besides biology, they might well come to similar conclusions about reducing the quantity of less relevant information. Much of what is currently found in elementary and secondary school materials consists of nonessential information that is included by tradition or because of special interests of authors or others.

Existing curriculum objectives can be maintained while presenting contemporary topics, such as aging-related issues. For example, if one objective of material for teaching government is to track the legislative process by which a bill becomes law, then a bill dealing with an issue of aging could be used. Students would gain the basic concept of how the legislative process works and the issue of aging would be presented. If the goal is to help students understand prejudice and discrimination, then examples of ageism along with racism, sexism, or other forms of prejudice would be timely. If the goal is showing how technology impacts society, then attention to the role of technology in the longevity revolution would be appropriate. For language arts materials, literature that features diverse older characters, contains intergenerational themes, or focuses on aging topics would be relevant. Health education materials could link health in youth to adulthood, and include older persons when covering family health practices. Elementary social studies activities that have students work with timelines could extend timelines into later life, with mention of common later life events like grandparenting and retirement activities. The question, then, is not whether there is room for new content, but where and how to include new content.

Manner of Presentation

Studies of existing instructional materials on aging indicate the general lack of content and a tendency to present aging unrealistically. It is counterproductive to integrate new content on aging, without considering how the content is presented. No matter how good the information, if the presentation is not balanced and realistic, the message will not benefit young people. Having grown up in an ageist and gerontophobic culture themselves, authors, illustrators, and educators unwittingly produce ageist materials. In the absence of accurate knowledge, they may likely use outdated, ageist images when developing instructional materials.

Below are ten interrelated questions that can serve as useful guidelines for revising existing materials or producing new ones that address the critical need for instructional materials that adequately and fairly deal with issues of aging.

1. Are aging issues appropriately included in different subjects? The study of aging is an interdisciplinary field. A single elective course during high school fails to address the universal need for all students to understand aging-related issues. By taking an interdisciplinary approach, valuable and interlocking concepts are reinforced throughout students' educational experiences. No one discipline needs to feel burdened by another "add-on," since instruction about lifespan issues fits naturally within existing interdisciplinary curriculum objectives.

Developers of curriculum and instructional materials can use the concepts in the previous chapter to identify specific content that could be useful to students and that would be appropriate in different subjects. Biology materials can deal with the lifelong process of aging. American history and government books can deal with major issues, developments, and legislation that daily influence the lives of millions of living older adults and their families. Business education and social studies can consider population aging and its far-reaching effects on the economy now and in the future. Material for behavioral sciences, health, and family and consumer sciences can emphasize wellness as the norm for people of all ages. Anthologies of literature could contain selections by and about older people, about the experience of growing older, and about relationships between generations. Art and music classes could include works by and about older persons. No matter what their subject or grade level, all teachers will find that aging-related concepts offer the potential for a richer and more relevant curriculum. (See Appendix C, Sample Activities.)

2. Is information as it relates across the lifespan distributed appropriately throughout the material? Devoting only one section at the end of a text to aging ignores the lifelong process of growing older and the connection of aging to other facets of life. Segregating content on aging as a "special topic" strengthens the notions that older adults are a separate group and that issues of aging have only to do with older people. Even if aging were narrowly thought of as occurring in the later years, say after age 65, today this stage of life stretches into two decades and more, longer than the whole passage from birth to adulthood. Treating later life as a separate, add-on topic would be counterproductive.

3. Is non-technical vocabulary related to aging included? The specific age-related vocabulary used will, of course, depend on the subject. Terms related to biology or health may not fit in the context of social studies. Terms for economic issues of aging may fit into some business, technology, and social studies courses, but not others. Depending on the subject and grade level, such everyday terms as ageism, caregiver, generation, life expectancy, pension, and retirement should routinely appear. Students can make such terms a part of their working vocabulary by learning and using the terms in classroom readings and activities. (See Appendix A, Glossary of Common Terms related to Aging.)

Manner of Presentation Checklist

1. Are aging issues appropriately included in different subjects?
2. Is information as it relates across the lifespan distributed appropriately throughout the material?
3. Is non-technical vocabulary related to aging included?
4. Is information about aging accurate and current?
5. Is there a balanced and realistic view of aging?
6. Is the diversity among older people reflected?
7. Are age and cohort differences among the older population noted?
8. Is undue emphasis on disease, disability, and death avoided?
9. Are curriculum-based intergenerational experiences promoted?
10. Is information sharing with adult family members of students encouraged?

4. Is information about aging accurate and current? Instructional materials that rely on old research and data cannot accurately describe older people today. Aging education must distinguish between myth and reality, between older adults yesterday and today. New research findings, scientific breakthroughs, and cohort shifts mean that what we think is true today may be outdated tomorrow. Updating information is an ongoing process in the development of curricula and instructional materials. Understandably, educators and developers of curriculum and instructional materials cannot suddenly become gerontology experts. However, they can give the same kind of attention to the validity of aging issues as they do for other topics. Data should come from current and reliable sources, statistics should be up-to-date, and the information presented should utilize recent findings in gerontological research. If information is inaccurate, then "the problem is not what people don't know, but what people know that just isn't true."

5. Is there a balanced and realistic view of aging? Aging should not be presented in such a way that it intensifies negative attitudes and fears of aging. The great majority of older people are not poor, sick, inactive, depressed, institutionalized, or overly dependent on others. The majority of older people enjoy good health, follow active lives, live independently in their own homes, and are resources to their families and communities. Therefore, neither the language nor the illustration in instructional materials should present aging as a "problem," seek to arouse generalized pity and false sympathy for older people, or in any other way foster or reinforce negative attitudes in the minds of young people.

Being balanced and realistic does not mean that everything about older people should be presented in a "fifty-fifty" fashion. Presenting equal numbers of men and women in the text or illustrations would not square with the reality that older women greatly outnumber men. Inserting one photo of a frail, sick, dependent older person for each active, healthy, independent older person portrayed does not reflect the reality that the overwhelming majority of older people fall in the second category. Some writers, in trying to counter negative associations, have replaced one extreme view with another. Stereotypes that somehow glorify age and that suggest generalized attributions of inherent wisdom with age are not balanced or accurate. Simpiistic portrayals of later life as being mostly fun and frivolity may superficially cause young people to view old age in positive terms, but it does not prepare them for a life course of challenges and opportunities. A balanced view of aging should correspond to reality, not an artificial sense of fairness or equal treatment.

6. Is the diversity among older people reflected? Aging is an individual process, and the experiences of becoming and being an older person vary tremendously among persons. Age is not a reliable predictor of someone's personality, health status, economic situation, or political views. Older adults are not exclusively kind, cute, or wise any more than they are invariably greedy, grouchy, or goofy. Like people of any age, older adults may be healthy or sick, happy or sad, rich or poor, liberal or conservative, generous or greedy. It is false and misleading to present older people as if they were all alike or as if their age alone somehow made them distinct or separate from other people.

Diversity is a difficult concept to convey when information is presented as averages and based on experiences of the majority. However, developers of curriculum and instructional materials have faced this challenge in how it deals with the diversity within racial and ethnic groups, and in the way women are presented. Equal sensitivity can be given to portraying the diversity within the older population. Terms such as "the elderly" and "the aged" that homogenize older persons should be avoided, as should careless use of such pronouns as "they" and "them" to refer collectively to what older people are like, what they think, or what they want or need.

7. Are age and cohort differences among the older population noted? Older adults should not be represented as a single birth cohort. People now in their 60s are a full generation younger than those in their 80s and 90s. A few older adults were born and grew up in the days of horse-drawn carriages. Some entered adulthood during the Great Depression, some during World War II. Those now entering their 50s experienced the Vietnam War. Such diverse experiences defy one classification. When it is necessary to to speak of older persons in the aggregate, the information can be qualified by a brief acknowledgment of different age cohorts. (See introduction to Demographic Aspects of Aging, Chapter 2, page 23.)

8. Is undue emphasis on disease, disability, and death avoided? It is misleading to link "aging, death, and dying," as if they automatically go together. Similarly, aging is not a disease and should not be routinely equated with physical or mental illness. Although it is proper and important to deal with diseases and disabilities common in later life, the human capacity for wellness of body and mind at all stages of life should not be neglected or understated. Disabilities and diseases should not be presented solely in reference to old age. Issues of death may be appropriately addressed in some subjects, but aging should not be equated with dying or treated as simply the final stage of life before death. (See item 8, Physical and Biological Aspects of Aging, Chapter 2, page 33.)

9. Are curriculum-based intergenerational experiences promoted? Classroom instruction can come alive when teachers tap into the experiences and interests of older community members. In addition to being aides, readers, tutors, and mentors, older adults appreciate being asked to participate as experts or co-learners, such as writers, travelers, oral history resources, demonstrators of crafts and skills, and participants in discussions on contemporary topics.

For depth of understanding students need both instruction and experience. Students can learn simply by reading, but learning is abstract when the only basis of understanding is the printed word. Studying aging without involving older people would be similar to studying botany without using plants. However, intergenerational experiences need to be a complement to, not a substitute for, education about aging. Having students spend time with older adults without providing them adequate instruction would be like taking a botany class to visit a greenhouse regularly without giving any instruction on plant life. Students might like plants, but they would not have knowledge and skills to differentiate and understand them.

Purposeful school-based intergenerational activities need to address curriculum goals. The objective to "get the generations together" is insufficient justification for using instructional time. Activities such as Halloween parades in nursing homes or token visits during holiday periods are neither about education nor building relationships. Teachers have little time for activities that do not relate to their course content. Developers of curriculum and instructional materials can suggest meaningful intergenerational collaboration that bring older adults into a reciprocal learning process.

Students gain broader perspectives of life through diverse experiences. This is not accomplished when nursing homes are the primary or only setting for school-based intergenerational activities. Some teachers are successfully using nursing homes for service-learning opportunities or for life writing exercises. However, caution is needed. We would not think of suggesting class visits to ghettos to teach about a racial or minority group. For a host of reasons this would be unacceptable, but one reason is that students could easily think they are seeing the big picture when they are actually looking at a small section. The same is true of nursing home visits. Unless students have considerable other contact with healthy, active older people and an accurate, balanced educational background on aging, then trips to nursing homes probably only reinforce gerontophobic attitudes. For some individuals, uncomfortable, even frightening visits to nursing homes at young ages have left negative impressions that carried over to adulthood.

Adults organizing and supervising all intergenerational activities need to give attention to the orientation and environment. Activities need to be mutually beneficial for younger and older participants. Opportunities for feedback and processing help students and older adults give their experiences perspective. Instructional materials can suggest intergenerational experiences that reflect the diverse older population by using older adults with a range of experiences, interests, and abilities representative of the older population.

10. Is information sharing with adult family members of students encouraged? Although the purpose of K–12 schools is the education of their students, they have a secondary role of serving the larger community. Numerous public education efforts focusing on such issues as recycling, seat belts, cigarettes, and fire and home safety have used K–12 schools as conduits of information to the larger community. Many family members have changed their attitudes and behaviors because of what children learned in school and brought home. Schools do this without taking on another weighty responsibility, but make it a natural, integral part of student learning, or students are simply moved enough by what they learn that they naturally want to share it with important figures in their lives. Similarly, schools can play a valuable role in promoting general public education about important aging-related issues such as health promotion, family caregiving, and retirement planning.

When students have reading materials and homework assignments that engage their family members, new and beneficial information is disseminated beyond school walls. Encouraging students to share information with their parents, grandparents, or other older adults has multiple advantages. When students apply classroom instruction to personal or real life situations, they see immediate application and learning increases. When adult family members are included in the teaching and learning process, they can benefit personally from the information and have the opportunity to work as partners with schools. While respecting home-school boundaries, educators can capitalize on the significant and potential influence of parents and grandparents have on young people.

Guidelines for Photographs and Drawings

If a picture is worth a thousand words, then explicit and implicit messages about aging conveyed by photos and other illustrations in instructional materials are valuable. In current materials, there is a general dearth of photos of older people, and a similar absence of charts, graphs, or other illustrations related to aging. If nothing else, this absence implies that older people are not relevant and that aging is not an important topic. This implicit ageist message parallels the similar absence of women and racial groups that once characterized educational materials before raised consciousness about racism, sexism, and ethnic prejudice. Much information about aging and age-related issues is quantitative in nature and lends itself well to presentation in the form of graphs, tables, or charts. Eye-catching and uncomplicated illustrations of this kind can effectively communicate basic concepts about such matters as changing life expectancy, comparative life cycles of humans and animals, birth and death rates, age structure of the population, poverty rates among age groups, and Social Security finances.

Photographs and drawings are evaluated in terms of the information and messages they convey individually and collectively, following similar guidelines that were explained in the previous section. Illustrations can reflect the heterogeneity of older people and the diverse ways in which people grow up and grow old. Without ignoring physical decline and other problems common in later life, illustrations can best present the prospects for remaining healthy and productive in old age. The appropriateness of photos and drawings of older people will vary depending on the subject and grade level. Standards for illustrating a social studies text would be different from those for illustrating a child's first reader, but some basic rules can still apply. The following basic guidelines must be modified to suit the kind and purpose of material being developed.

1. Proportional representation. The percentage of photos of older people needs to correspond approximately to the percentage of older people in the population or in the spread of ages with which the material deals. People age 65 and over currently make up about 13% of the United States population, and about 20% of the adult population.

2. Independent living. Portrayals of older people need to reflect the fact that the vast majority of older people live in their own homes or other private dwellings within the community. About 95% of people over age 65, and still more than 80% of people over age 85, live in community settings, not in nursing homes or other long-term care institutions.

3. Serving others. Older people can be portrayed serving others at least as often as they are shown being served. Substantial numbers remain in the workforce on a full-time, part-time, or temporary basis, and millions of older people volunteer considerable time to their families and communities. Older adults serve others as a routine part of family or civic duty. From the famous, like former President Jimmy Carter working for Habitat for Humanity, to the ordinary, like members of the Retired Senior Volunteer Program, older adults are contributing members of society.

4. Active roles. Older adults can be portrayed in active roles. They should not be routinely pictured in sedentary or passive roles such as sitting, lying down, watching television, sewing, fishing, or reading. An accurate portrayal would show older persons working at jobs, driving cars, teaching, attending classes, serving on committees, exercising, and engaging in physical activities.

5. Diverse roles and dress. Older characters can be shown in diverse roles and dress. Stereotyped portrayals perpetuate outdated caricatures of older persons. Relatively few older women today spend much time in their kitchens wearing aprons, with their hair in a bun, baking cookies. Not all older men wear overalls and sloppy hats, or spend much time fishing or feeding the pigeons in the park.

6. Noted accomplishments. When materials contain photos of people noted for their accomplishments, as in history books, pictures of older people who made significant accomplishments in later life can be included. Ideally, these would include contemporary people, not just notable figures of the past.

7. In mixed-age groups. Older adults need to appear in mixed-age groups. Most older people maintain strong ties to family and community, not just with peers of their own age. Portrayals of mixed-age groups should not be confined only to family connections, but should also show older people in contact with younger people in various community settings.

8. Non-stereotypical grandparents. Grandparents need to be depicted at different

Photographs and Drawings Guidelines

1. Proportional representation
2. Independent living
3. Serving others
4. Active roles
5. Diverse roles and dress
6. Noted accomplishments
7. In mixed-age groups
8. Non-stereotypical grandparents
9. Different physical abilities
10. Informative, not deprecating

ages and with different interests and backgrounds. Since children have never before had so many grandparents and great-grandparents, it is only appropriate that more attention be given to grandparent-grandchild relationships in instructional materials. However, book illustrators tend to rely on images of their own grandparents, rather than those of their young readers. The role of grandparents varies with cultural, demographic, social, economic, psychological, and historical factors. Not all grandparents are 65 years old, but can be decades younger or older. Illustrations in children's readers and instructional materials can reflect the diversity among grandparents and find opportunities to represent great-grandparents.

9. Different physical abilities. Older adults should be shown with different physical abilities, and not routinely shown with physical handicaps. Overuse of photos or drawings portraying older people with canes, in wheelchairs, or in bed, are misleading and harmful. For example, illustrations in children's books and instructional materials frequently rely on the cane as a symbol of old age, yet only a small percentage of older people use canes.

10. Informative, not deprecating. Drawings and cartoons stereotyping older adults should be used only to call attention to stereotypes. The old saying, "There is no harm in a good laugh," is not true. In fact humor is one of the chief ways of perpetuating harmful stereotypes of age, just as it is of race, gender, and ethnicity. Although poking fun at aging through cartoons and stereotypical caricatures may be common in ageist greeting cards, they do not belong in K–12 instructional materials.

The mental images that young people form of aging and older adults as the result of illustrations in their educational materials may, in the long run, be more powerful and enduring than any images derived from the printed word. Judicious use of illustrations can serve a particularly important need in preparing young people for the potential of long life.

Young people need to realize that much of the negativism that they may have absorbed from their ageist culture is inaccurate. When presented with a healthier, more balanced vision of what the future can hold, they may be more inclined to adopt those habits of body and mind that will give them the best chance of achieving the kind of old age anyone would like to have.

Chapter 4

Who Is Supporting Education for Longer Life?

Support for education about aging in elementary and secondary grades has grown steadily over the past three decades, with periods of increased activity generated by grant support for research and curriculum development. Individual teachers, local school districts, state agencies of education, professional education associations, and college education and gerontology programs across the United States have recognized and responded to the need for instruction about aging.

Foundation for Educational Reform

Previous efforts over the last two or three decades provide a solid basis for further progress in the coming decade. The following noteworthy accomplishments emphasize that this is not a recent or passing fad in education, but one that has earned the attention of people in both education and gerontology and at all governmental levels for some time. This summary of efforts toward K–12 education about aging is comprehensive but does not begin to acknowledge countless other efforts across the United States that have received limited attention outside their geographic region.

White House Conferences on Aging

Every White House Conference on Aging (1961, 1971, 1981, 1995) has endorsed the need for education about aging. The 1961 conference report on *Education and Aging* made a strong endorsement aging education in public schools, higher education institutions, and libraries:

> Education for aging is related to each aspect of aging and is part of the lifelong learning process. Education for everyone about aging will influence community attitudes and actions with respect to aging problems. . . . The initial stimulation of education programs for, and about, and by aging, should be through institutions that have public responsibility for education, that in combination, have nationwide coverage and that have the confidence of all groups. These institutions are public schools, institutions of higher learning, and libraries. (p. 5)

Similarly, the 1971 conference suggested mandatory life cycle education at all levels of public education and that programs be developed to train teachers about aging. The 1981 White House Conference on Aging sponsored a pre-conference devoted solely to the topic of intergenerational cooperation and exchange. Like previous conferences that were said to reflect a national consensus, it emphasized that understanding about aging is impor-

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tant to people of all ages. The most recent 1995 White House Conference on Aging resolved that information about aging be integrated into the curriculum at all educational levels.

In a private-public effort, the Administration on Aging and ITT Hartford Insurance funded a 1995 mini-White House Conference specifically on "Schools in an Aging Society: Educating Youth for Today's Families and Workforce." The conference was sponsored by the American Association for Retired Persons, the Center for Understanding Aging (now the National Academy for Teaching and Learning about Aging), the National Council on Aging, the National Retired Teachers Association, and the U.S. Department of Education. Through a group process, leaders representing diverse national education and aging organizations developed five recommendations:

1. Curriculum and educational resources for K–12 students should include life course planning which affects physical, social, financial, and psychological aspects of the human experience. As part of life course planning, later life issues should be integrated throughout subjects such as social studies, health and humanities.
2. Schools of education should develop, evaluate, and disseminate effective practices in teacher preparation and staff development for the integration of aging education across disciplines and grade levels.
3. Professional education associations should sensitize their membership on the aging process through annual meetings, publications, and training seminars so that aging education is integrated into professional activities.
4. National, state, and local aging organizations should work with educators to change mixed stereotypes about aging by developing an integrated approach to aging education which includes (a) meaningful roles for older adults in schools and (b) balanced curriculum about age diversity.
5. National, state, and local governments should (a) support research on and dissemination of best practices in aging education, and (b) promote partnerships among educators and aging networks to infuse life course issues into K–12 curriculum.

Although such proposals for policy changes help establish a consensus about issues, they are ineffectual unless adopted and implemented by those primarily involved in making the changes happen, in this case educators. When public forums about children make resolutions for a lifespan approach to education, then we are more likely to see implementation.

State Departments of Education

In response to the 1971 White House Conference on Aging, in 1978 the California State Department of Education developed a *Handbook for Instruction on Aging in California Public Schools*. This was one of the early attempts at developing curriculum on aging concepts for students in kindergarten through grade twelve. In the late 1980s, California approved voluntary guidelines and policy recommendations for aging education, and several other state departments of education sponsored teacher workshops on aging. In 1984, the Minnesota Department of Education and Board on Aging collaborated on *Aging Curriculum for Secondary Schools*. In 1989, the New York State Board of Regents adopted *Educational Elements of a Comprehensive State Policy on Aging*, which included consideration of the reciprocal relationship between schools and older residents in communities.

During the 1990s, the U.S. Administration on Aging and the Department of Education encouraged continued interest in K–12 aging instruction by funding the development of curriculum materials and teacher training for different disciplines and grade levels in Connecticut, Mississippi, and Missouri. The Connecticut Department of Education and Department on Aging produced *Schools in an Aging Society*, a set of six guides available through the National Academy for Teaching and Learning about Aging. Four of the guides contain classroom activities for secondary language arts, health and home economics, social studies, and pupil personnel specialists. Two guides are on *Strengthening the School-Community Connection* and *Elders as Resource Persons*. The Mississippi Department of Education, capitalizing on state-wide review of the secondary health curriculum, produced *Promoting Aging Awareness Among Youth*. The Missouri Department of Education developed a series of materials for grades three, seven, and ten, collectively titled *Promoting Aging Awareness Among Youth*.

Some states are currently considering areas where aging content can be integrated within new guidelines of their core curriculum. For example, the 1997 Texas Essential Knowledge and Skills promotes a lifespan approach to topics in several disciplines, but especially health, by including phrasing such as "across the lifespan" and "for all ages" in learning objectives. This list, while not comprehensive, highlights serious efforts by state education departments to change how and what young people learn about aging.

College Education and Gerontology Programs

Numerous individuals representing college education and gerontology programs in several states have over the past two decades promoted teacher preparation and curriculum development in aging by sponsoring courses, institutes, and workshops on aging education. Since the mid-1970s, educational resources on aging were developed at several institutions of higher education, including Ball State University, Iowa State University, Montana State University, San Jose State University, Southern Illinois University at Carbondale, State University of New York at Cortland, University of Akron, University of Denver, University of Bridgeport, University of Iowa, University of Maryland, University of Michigan, University of Pittsburgh, University of Southern California at Los Angeles, University of Texas Health Science Center at San Antonio, and Utica College. At one time the Tennessee Technological University operated a Clearinghouse for Elementary and Secondary Aging Education. Faculty members from many other universities across the nation, such as Bowling Green State University, Indiana University, Ithaca College, Florida State University, University of California at Los Angeles, and University of Tennessee are known to be among the growing numbers in college gerontology and education programs who are contributing to the educational reform movement. The College of Education at the University of North Texas has offered professional development opportunities for college of education faculty members and has integrated aging-related content into their regular teacher preparation courses. Some college professors are working to introduce aging content in K–12 instruction and teacher preparation by building relationships with local school districts, teacher inservice programs, and professional education associations. In 1985, the college textbook for education, *An Introduction to the Foundations of Education*, accurately noted that aging education is an "emerging" curriculum trend, although its advance seemed to temporarily wane during the decade following 1985, only to regain momentum during the coming decade. Such noteworthy examples from across the United States serve as models for other education and gerontology faculty.

Local School Districts and Individual Teachers

When provided with resources, school districts are welcoming education about aging, not only because it benefits students, but also because it encourages curriculum-based linkages with older voting residents and because it is useful for school staff who face personal aging-related issues.

School administrators are recognizing the need for local schools to be responsive to older residents through curriculum-based instruction that encourages understanding and cooperation across generations. Thousands of classroom teachers have voluntarily enrolled in special gerontology-related courses, summer institutes, and weekend workshops offered across the United States by various colleges, state departments of education, area agencies on aging, and other organizations. Countless others have on their own found ways to include aging topics in their instruction.

A few local school districts, under the leadership of progressive administrators and teachers, have taken the initiative to address students' needs for information about aging. These have included model programs and curriculum development. Pioneering efforts in two Massachusetts independent school systems (Acton and Rockland) around 1980 produced extensive teacher materials that became resources for teachers in school districts across the United States. San Diego (California) Public Schools followed with an extensive curriculum guide on aging for elementary school teachers. In 1990, Fairfield (Connecticut) Public Schools developed AGES (Advancing Generations' Education through the Schools), a planning model that promotes awareness of older adults through staff development, intergenerational exchange projects, curriculum on aging, and classroom and extracurricular activities. The AGES model was documented in the series *Schools in an Aging Society*. Individual classroom teachers over the years have invested personal time and expense to promote aging education, sometimes documenting their efforts through the ERIC (Educational Resources Information Center) system. Certainly, countless other school districts have developed exemplary programs even though their successes were not documented or were less widely disseminated.

Through the years, countless organizations representing youth and aging organizations have promoted intergenerational education programs. Curriculum and classroom suggestions are part of some intergeneration materials coming from across the United States, such as from the states of Florida, Illinois, Iowa, Kansas, Kentucky, Pennsylvania, and New York. More recently, service-learning programs have included some aging-related content, although these are typically geared more for service to frail older adults in medical settings. (See item under Manner of Presentation, Chapter 3, page 82.)

Professional Education and Aging Organizations

Various organizations related to aging have recognized the need for broader education. National associations, including the American Society on Aging, the Association for Gerontology in Higher Education, the Gerontological Society of America, and the National Council on Aging, have had annual meeting presentations on K–12 education with enthusiastic responses. Some aging organizations have developed materials for youths. The New York Sate Department on Aging and the Alzheimer's Disease and the Related Disorders Association of Eastern Massachusetts developed video and print resources on elder caregiving specifically for teenagers. Although educators were not targeted to use these resources, they would find the materials appropriate for classroom use. Some Area Agencies on Aging have also extended their community education efforts to include schools. These examples suggest that many national, state, and local organizations on aging would be willing partners in K–12 education for longer life.

Several professional education associations have also promoted education about aging through presentations at annual meetings and journal articles. These have included the American Association of College Teacher Educators, the Association for Supervision and Curriculum Development, the National Council for the Social Studies, the National Association for Early Childhood Education, and the National Geographic Alliance, among others. The journal *Educational Gerontology* has been a leader in disseminating research on aging education at all levels and welcomes reports of research at the elementary and secondary levels. Evidently anticipating growing interest in aging as an emerging field of education, as early as 1982, the National Education Association published *Teaching and Learning about Aging* which provided suggestions and a solid rationale for curriculum on aging. This significant publication was preceded by a few focused efforts such as a curriculum model on *Teaching about Aging*, published jointly by the Social Science Education Consortium, and the ERIC Clearinghouse for Social Studies, and funded by the then National Institute of Education of the U.S. Department of Health, Education, and Welfare. Also, the education journal *Intercom* featured "Global Aging Trends and Education" as the theme of one its issues, which included conference materials funded by the United Nations Fund for Population Activities.

Publishers, News Agencies, and Businesses

Several book publishers have responded to the growing interest in bringing aging-related issues into K–12 classrooms by providing teacher and classroom materials. Among these have been both small and large publishers, including Allyn and Bacon, American Guidance Service, Argus Communications, Davos-Laret Books, Macmillan, and J. Weston Walch. We can expect over the next few years for mainstream publishers to have curriculum resources on aging education, separate from and in connection with intergenerational programs. A beginning sign of this emerging trend is the 1998 Allyn and Bacon publication *Connecting Generations: Integrating Aging Education and Intergenerational Programming in Grades 2-8.*

In 1984, the Public Broadcasting System (PBS) in Syracuse, New York (WCNY) produced *Old Enough to Care*, six 15-minute programs about aging specifically for high school students. In 1993, the Annenberg/CPB Collection premiered *Growing Old in a New Age*, a 13-part series that was aired over PBS stations. *Newsweek* magazine identified aging as the featured topic in its 1998 NewsSource Unit for teacher subscribers. Some religious education organizations have joined the movement with their in-house publications. Some businesses have occasionally seen merit in providing educators with resource materials related to aging. In 1983 J. C. Penney Company published its own teacher resource on aging through its Consumer Education Services, and in 1993 Sandoz Pharmaceuticals Corporation sponsored a coloring book for children with instructional text about aging.

National Academy for Teaching and Learning about Aging (formerly Center for Understanding Aging)

The Center for Understanding Aging (CUA) was the outgrowth of pioneering work under the 1979 Teaching and Learning about Aging project of the Acton-Boxborough (Massachusetts) Regional School District. Leaders in the intergenerational and aging education movement founded the CUA in 1983 as a national nonprofit organization. Its goals were the education of the public about aging and the fostering of understanding across generations. The Center helped countless organizations develop or expand their own aging education programs and intergenerational activities.

In 1996, the University of North Texas (UNT) provided a university base for the CUA. Its new name, the National Academy for Teaching and Learning about Aging, helped define the organization's focus on promoting education about aging in K–12 instruction and teacher preparation. NATLA's university home was established through collaboration with UNT's College of Education (the fourth largest teacher preparatory institution in the United States), Department of Applied Gerontology (established in 1969), and the

Texas Institute for Research and Education on Aging, and in cooperation with the National Retired Teachers Association (NRTA), a division of the American Association of Retired Persons (AARP). With private and public funding, NATLA provides models of classroom activities for K–12 teachers, teacher training, national institutes, and special interest groups chaired by college faculty and persons from across the United States who are experienced in promoting aging education in their respective disciplines.

National Retired Teachers Association

In 1996 the NRTA set as a long-term priority the promotion of youth education for the enrichment of aging. To advance AARP's vision of enriching the lives of all generations through education, the NRTA, in collaboration with the NATLA, published *Teaching about Aging: Enriching the Lives across the Life Span* (1997). NRTA members at the local and state levels are developing strategies to facilitate educational reform by sensitizing current educators about the need to integrate life course content in K–12 curriculum, instructional materials, and teacher education. Retired educators, perhaps more than any other single group, understand both education and aging concerns, and have the potential of bringing national attention to this growing movement. Retired educators and older community leaders are working with their state and local organizations and the NRTA to develop models for ways retired teachers can initiate aging educational reform in universities, local school districts, and legislative action. These older adults, with their deep concern for the younger generations, will be a strong voice for education for longer life.

Learning from the Past

With so much developmental work from diverse groups across the United States over at least two decades, why is K–12 education about aging not further along than it is? An underlying problem is the general cultural avoidance of talking about aging topics, especially on a personal level. Furthermore, the political climate in education in which teachers are basically under siege has been another factor. When schools become both the blame and the solution for countless numbers of societal concerns, teachers lack the time and energy to address educational issues that do not have a sense of urgency. Occasional one-time teacher training programs in isolated locations across the United States reach only a small proportion of teachers. Even the most zealous teachers and supportive schools for the most part have been unsuccessful in sustaining or institutionalizing efforts to infuse aging-related content into curricula.

Organizations such as the Administration on Aging, as well as university gerontology programs, have initiated many of the past efforts, but collaboration with professionals from the education community has often been tangential, nominal, or short-term. Although leaders representing older adults (i.e., the founding director of the National Institute on Aging, Robert Butler; the founder of the Gray Panthers, Maggie Kuhn; and former U.S. Assistant Secretary on Aging, Fernando Torres-Gil) have publicly advocated K–12 education about aging, their messages have usually been diluted by other pressing concerns for older persons.

The movement for K–12 education for longer life is not under the umbrella of any single national organization, has no charismatic leaders, and has yet to be coordinated as a national campaign. Isolated classroom teachers or school systems cannot single-handedly bring about the kind of systemic changes that are necessary to affect teacher training, curriculum development, and instructional materials nationwide.

Past curriculum and instructional materials on aging have had relatively limited circulation. Most of the works are archival, out-of-print, and not easily accessible. Instead of building on past efforts, "new" endeavors to present aging content to young people are often re-inventions or repeats of models developed decades ago. Some teaching modules are worth replication and broad dissemination, but others that emphasize the "aging-as-falling-apart" theme need to be exposed as out-dated and inappropriate so that they are not presented in today's classrooms.

Some gerontology training for educators reinforces the notion that aging topics are boring, irrelevant, and depressing. For the most part, college gerontology lectures are neither appropriate nor inspiring for K–12 teachers. Effective teacher training on aging education needs both up-to-date content and approach. If experts in gerontology want teachers to integrate concepts related to aging into classroom instruction, then gerontologists in turn need to use skilled teaching methods consistent with adult learning principles. Finally, teacher training needs to be presented so that educators can clearly see the relevancy to their students' present and future lives. Gerontology training models designed for social workers, hospital staff, college students, or nursing home administrators have objectives and content that does not satisfy teacher needs or expectations.

Past efforts have proved inadequate to the mammoth task of infusing aging-related content across grades and disciplines. Although implementation of K–12 learning for longer life has so far been fragmented, the foundation for progress in this exciting and emerging field of education is solid. The stage is set for rapid, sweeping change in what and how young people learn about aging.

Moving Forward

If past efforts have had limited success, what is needed to make learning for longer life part of every students' education? Demographics alone will be a driving force in the coming decades for systematic K–12 integration of aging-related concepts. For sustained efforts that build on the past and make lasting inroads, strategies that reach different facets of education almost simultaneously are needed. Teacher training, curriculum development, instructional materials, and evaluation research are the necessary, interrelated components of institutionalized reform. Strategies to bring change in these four areas are in progress now and growing. The list below describes steps now taking place that will assure systemic changes in education across the United States.

1. State boards of education and local school districts are beginning to incorporate lifespan education language in their curriculum guidelines. Other schools and state education agencies will follow with even more attention given to how age as a diversity and multicultural issue can be included.

2. State and national professional education associations are exploring ways to integrate balanced, accurate information about aging with their existing curricula. Educational organizations want to respond to the demands changing demographics have on what their members teach. Professional education meetings and publications will include more discussions of successful approaches to introducing later life concepts to young people.

3. Colleges of education are finding ways to infuse gerontology and lifespan development content into their teacher preparation courses. Gerontology faculty are finding new ways to promote understanding about later life by collaborating with their education colleagues. Graduate students and college faculty will contribute to the field of aging education through research and evaluation.

4. Authors and publishers of instructional materials are recognizing the social and political imperatives they face in order to respond to the growing public demand for quality classroom materials. Authors of instructional materials have a rich source of research and publications on aging from which they can develop varied and creative teacher and classroom resources that include gerontology concepts and terms.

5. Retired educators and older community leaders who are interested in quality lives for younger and older people are developing a grassroots movement that will bring education for longer life to the attention of local and state educators and boards of education. Retired teachers, working with national, state, and local education associations, have the potential of heightening awareness across the United States about the need for education for longer life.

Education for longer life, a lifespan approach to education, learning about aging and later life issues—these are the considerations of parents, grandparents, teachers, administrators, authors, publishers, and curriculum developers who want their children and students prepared for life in the twenty-first century.

A Word about the Future

When today's elementary school students reach their seventies, they may well be regarded as the "young-old" in a country that has about a million living centenarians. If such a vision of the future seems unsettling, it may be because we are projecting into the future our concept of what it means to be very old based on the centenarians we see today. Perhaps the worst kind of education we could provide children would be to teach them that their own future can be seen in the conditions of older people today. No one can say what it will be like to grow old in the middle or late twenty-first century, or under what kinds of conditions older people will live. We do know that old age today means something vastly different from what old age meant 50 or 100 years ago. We do not know whether the life of older people in the future will be better or worse, but we can be certain that it will be different. We can also be certain that, for better or worse, those who are now growing up and growing older will largely determine what it means to grow old in years to come.

In a world of ever-accelerating change, technological advances alone will not assure a bright future for an aging society. Building a better future will require an educated public. Through education those who have yet to grow old can prepare to create a better social climate in which to live a long life. People who are free of age-biases, knowledgeable about aging, and think positively about growing older will be in a far better position to create a brighter future for themselves and for others growing older. People educated about aging may be more likely to adopt healthy life styles and maximize their own chances for living long and living well. They may be better able to care for aging relatives, neighbors, and friends. They may be less likely to practice age discrimination, and as voters will make informed decisions on issues affecting all generations. It will be these human factors, not just technology, that will decide what the future holds.

As the graying of America continues, quality education about aging will be a key ingredient in creating a better social environment in which to grow up and grow old. Quality education about aging will, in turn, depend largely on high quality curriculum and instructional materials that make this kind or education possible. Educators, authors, editors, and publishers have important roles. In the words of Charles Kettering, "We should all be concerned about the future, because we will spend the rest of our lives there."

References

Chapter 1. Why Education for Longer Life?

Cultural Stereotypes to Confront

Couper, D., Sheehan, N., & Thomas, E. (1990). Attitude toward old people: The impact of an intergenerational program. *Educational Gerontology, 17,* 41–53.

Couper, D., Donorfio, L., & Goyer, A. (1995). *Children's images of aging.* (Final research report to the American Association of Retired Persons). Southington, CT: Center for Understanding Aging (now National Academy for Teaching about Aging).

Fillmer, H. T. (1982). Sex stereotyping of the elderly by children. *Educational Gerontology, 8,* 77–85.

Ivester, C., & King, K. (1977). Attitudes of adolescents toward the aged. *The Gerontologist, 17,* 85–89.

Jantz, R. I., Seefeldt, C., Galper, A., & Serlock, K. (1977). Children's attitudes toward the elderly. *Social Education, 41,* 518–523.

Lasher, K., & Faulkender, P. J. (1993). Measurement of aging anxiety: Development of the anxiety about aging scale. *International Journal of Aging and Human Development, 37(4),* 247–259.

Page, S., Olivas, R., Driver, J., & Driver, R. (1981). Children's attitudes toward the elderly and aging. *Educational Gerontology, 7,* 43–47.

Palmore, E. B. (1990). *Ageism: Negative and positive.* New York: Springer Publishing.

Seefeldt, C. (1987). The effects of preschoolers' visit to a nursing home. *The Gerontologist, 27,* 228–232.

Shenk, D., & Achenbaum, W. A. (Eds.). (1993). "Changing perceptions of aging and the aged," *Generations* (entire issue), *17(2).*

Status of Aging-Related Content in Instructional Materials

Ansello, E. F. (1977). Age and ageism in children's first literature. *Educational Gerontology (2),* 255–275.

Ansello, E. F. (1976). How older people are stereotyped. *Interracial Books for Children Bulletin, 7(6),* 4–6.

Baggett, C. (1981). Ageism in contemporary young adult fiction. *Top of the News, 37(3),* 259–263.

Barnum, P. W. (1977, January). The aged in young children's literature. *Language Arts, 54,* 29–32.

Bendremer, J. (1990). Saints or sinners? Older women in literature. *Perspective on Aging,* 19–21.

Constant, H. (1977, January). The image of grandparents in children's literature. *Language Arts, 54,* 33–40.

Dodson, A. E., & Hause, J. B. (1981; revised 1996). Ageism in Literature. An analysis kit for teachers and librarians. Acton, MA: Teaching and Learning about Aging Project. (Available from the National Academy for Teaching and Learning about Aging.)

Peterson, D. A. & Eden, D. Z. (1977). Teenagers and aging: Adolescent literature as an attitude source. *Educational Gerontology, 2,* 311–325.

Markson, E. W., & Pratt, F. (1996). Sins of commission and omission: Aging-related content in high school textbooks. The status of aging in high school textbooks. *Gerontology & Geriatrics Education, 17(1),* 3–32.

McGuire, S. (1993). Promoting positive attitudes toward aging: Literature for young children. *Childhood Education,* 204–210.

Oliver-Vazquez, M. (1993). Portrayal of the elderly in elementary school textbooks used by the Department of Education of Puerto Rico. Presented at the annual meeting of the Association of Gerontology in Higher Education, Louisville, Kentucky.

Seefeldt, C., Galper, A., Serock, K, & Jantz, R. K. (1978). The coming of age in children's literature. *Childhood Education, 54,* 123–127.

Watson, J. J. (1981). A positive image of the elderly in literature for children. *The Reading Teacher,* 792–797.

Recognizing Teachers' Needs

Broughman, S. P. (1997). *America's teachers: Profile of a profession, 1993–1994* (NCES 97-460). Washington, DC: National Center for Education Statistics, Office of Educational Research and Improvement, U.S. Department of Education.

Hoot, J. L. (1981). Teaching aging in the public schools: Results of an exploratory study. *Educational Gerontology, 7,* 331–337.

Fullan, M., & Hargreaves, A. (1996). *What's worth fighting for in your school.* New York: Teachers College Press.

Moseman, L. (1992). *Intermediate-level elementary teachers' knowledge about aging and classroom aging education practices: An exploratory study.* Unpublished doctoral dissertation, University of Nebraska, Lincoln.

Russell, J. F. (1979). Aging in the public schools. *Educational Gerontology, 4,* 19–24.

Chapter 2. What Content Should Be Included?

Demographic Aspects of Aging

Achenbaum, W. A. (1978). *Old age in the new land: The American experience since 1790.* Baltimore: Johns Hopkins University Press.

Myers, G. C., & Eggers, M. L. (1996). Demography. In J. E. Birren (Ed.), *Encyclopedia of gerontology: Age, aging, and the aged,* New York: Academic Press.

Myers, G. C. (1990). Demography of aging. In R. H. Binstock & L. K. George (Eds.), *Handbook of aging and the social sciences* (3rd ed.). San Diego: Academic Press.

National Center for Health Statistics. (1997). *U.S. decennial life tables for 1989–91.* Hyattsville, MD: Author.

Riley, N. E. (1997). *Gender, power, and population change.* Population Bulletin, 52 (1). Washington, DC: Population Reference Bureau.

Treas, J. (1995). *Older Americans in the 1990s and beyond.* Population Bulletin, Washington, DC: Population Reference Bureau.

United Nations. (1988). Economic and social implications of population aging: *Proceedings of the International Symposium on Population Structure and Development, Tokyo.* New York: Author.

United Nations. (1994). *Ageing and the family.* New York: Author.

U.S. Bureau of the Census. (1988). *Statistical abstract of the United States.* Washington, DC: U.S. Government Printing Office.

U.S. Bureau of the Census. (1992). *An aging world II.* International Population Reports, P25, 92-3,. Washington DC: U.S. Government Printing Office.

U.S. Bureau of the Census. (1995). Current Population Reports P25-917 and P25-1095, in Table 14, Resident Population, by Age and Sex, Statistical Abstract of the United States.

U.S. Bureau of the Census. (1996). Current Population Reports, P25-1130, Population Projects of the United States by Age, Sex, Race, and Hispanic Origin: 1995–2050, Washington, DC: U.S. Government Printing Office.

U.S. Bureau of the Census. (1996). *65+ in the United States*, Current Population Reports, Special Studies, Series P23-190. Washington, DC: U.S. Government Printing Office.

U.S. Department of Health and Human Services. (1992). *Vital statistics of the United States* (Vol.. 2, sec.6), Rockville, MD: Centers for Disease Control and Prevention.

U.S. Senate Special Committee on Aging, the American Association of Retired Persons, the Federal Council on the Aging, & the U.S. Administration on Aging. (1991). *Aging America, trends and projections*, (No. FCoA, 91-28001). Washington, DC: U.S. Department of Health and Human Services.

Physical Aspects of Aging

Bortz, W.M. (1996). *Dare to be 100*. New York: Simon & Schuster.

Doress, P. B., Laskin, D., & the Midlife and Older Women Book Project. (1987). *Ourselves, growing older*. New York: Simon & Schuster.

Fries, J. F. (1980). Aging, natural death, and compression of morbidity. *New England Journal of Medicine, 303,* 130–135.

Fries, J. F., & Crapo, L. M. (1981). *Vitality and aging*. San Francisco: Freeman.

Hayflick, L. (1996). *How and why we age*. New York: Ballantine Books.

Krupka, L. R., & Vener, A. M. (1982). Treatment of aging in secondary school biology textbooks: A neglected phenomenon. *American Biology Teacher, 44,* 264–269.

Population Reference Bureau. (1997). *Kids count*. Baltimore, MD: The Annie E. Casey Foundation.

Rockstein, M., Chesky, J. A., & Sussman, M. L. (1977). Comparative biology and evolution of aging. In C. Finch & L. Hayflick (Eds.), *Handbook of the biology of aging*, New York: Van Nostrand Reinhold.

Rowe, J. W., & Kahan, R. L. (1998). *Successful aging*. New York: Pantheon.

U.S. Bureau of the Census. (1996). *65+ in the United States*. Current Population Reports, Special Studies, P23-190. Washington, DC: U.S. Government Printing Office.

U.S. Health and Human Resources. (1990). *Health promotion for older Americans*. Washington, DC: Public Health Services.

Uhlenberg, P. & Riley, M. W. (1996). Cohort studies. In J. Birren (Ed.), *Encyclopedia of gerontology: Age, aging, and the aged* (Vol.. 1, pp. 299–310). New York: Academic Press.

Psychological Aspects of Aging

Belsky, J. K. (1998). *The psychology of aging: Theory, research, and practice* (3rd ed.). Monterey, CA: Brooks/Cole Publishing.

Birren, J. E., & Schaie, K. W. (Eds.). (1996). *The handbook of the psychology of aging* (4th Ed.). New York: Academic Press.

Butler, R. N. (1963). The life review: An interpretation of reminiscence in the aged. *Psychiatry, 26,* 65–76.

Costa, P. T., & McCrae, R. R. (1994). Set in plaster? Evidence for the stability of adult personality. In T. Heatherton & J. Weinberger (Eds.), *Can personality change?* Washington, DC: American Psychological Association.

Erikson, E. H. (1963). *Childhood and society*. New York: W. W. Norton.

Gatz, M., Kasl-Godley, J. E., & Karel, M. J. (1996). Aging and mental disorders. In J. E. Birren & K W. Schaie (Eds.), *Handbook of the psychology of aging*, pp. 365–382. New York: Academic Press.

Koenig, H. G., & Blazer, D. G. (1992). Mood disorders and suicide. In J. Birren, R. B. Sloane, & G. D. Cohen (Eds.), *Handbook of mental health and aging*. New York: Academic Press.

National Institute on Aging. (1995). *With the passage of time: The Baltimore longitudinal study of aging*. Washington, DC: Author.

Ruth, J. E. (1996). Personality. In J. E. Birren (Ed.), *Encyclopedia of gerontology* (Vol.. 2, pp. 281–294). New York: Academic Press.

Ryff, C. D. (1996). Psychological well-being. In J. E. Birren, (Ed), *Encyclopedia of gerontology* (Vol.. 2, pp. 365–370). New York: Academic Press.

Social Aspects of Aging

Achenbaum, W. A. (1978). *Old age in the new land: The American experiences since 1790*. Baltimore: Johns Hopkins University Press.

American Psychological Association. (1994). *Publication manual of the American Psychological Association* (4th Ed.). Washington, DC: Author.

Atchley, R. (1997). *Social forces in later life: An introduction to social gerontology* (8th Ed.). Belmont, CA: Wadsworth Publishing.

Biegel, D. E., Sales, E., & Schulz, R. (1993). *Family caregiving in chronic illness: Alzheimer's disease, cancer, heart disease, mental illness, and stroke*. Newbury Park, CA: Sage.

Brody, E. M. (1985). Parent care as a normative family stress. *The Gerontologist, 25,* 19–29.

Butler, R. N. (1969). Age-ism: Another form of bigotry. *The Gerontologist, 9,* 243–46.

Cirillo, L. (1993). Verbal imagery of aging in the news magazines, *Generations, 17(2),* 91–93.

Chudacoff, H. P. (1989). *How old are you? Age consciousness in American culture*. Princeton, NJ: Princeton University Press.

Dahlin, M. (1980). Perspectives on the family life of the elderly in 1900. *The Gerontologist, 20,* 99–107.

Denham, T. E., & Smith, C. W. (1989). The influence of grandparents on grandchildren: A review of the literature and resources. *Family Relations, 38,* 345–350.

Hummert, M. L., 1990. Multiple stereotypes of elderly and young adults: A comparison of structure and evaluation, *Psychology and Aging, 5(2),* 182–93.

McGowan, T. G. 1996. Ageism and discrimination. In J. E. Birren (Ed.), *Encyclopedia of gerontology: Aged, aging, and the aged* (Vol. 1, pp. 71–80). New York: Academic Press.

Meredith, G., & Schewe, C. (1994, December). The power of cohorts. *American Demographics*, 22–31.

Minkler, M., & Roe, K. M. (1993). *Grandmothers as caregivers: Raising children of the crack cocaine epidemic*. Newbury Park, CA: Sage.

Mitchell, S. (1995, October). The next baby boom. *American Demographics*, 22–31.

Neal, M. B., Chapman, N. J., Ingersoll-Dayton, B., & Emlen, A. C. (1993). *Balancing work and caregiving for children, adults, and elders*. Newbury Park, CA: Sage.

Nuessel, F. (1984). Ageist language. *Maledicta,* 17–28.

Riley, M. W. (1996). Age stratification. In J. E. Birren (Ed.), *Encyclopedia of gerontology* (Vol.. 1, pp. 81–92). New York: Academic Press.

Smith, J. W., & Clurman, A. (1997) *Rocking the ages: The Yandelovich report on generational marketing*. New York: Harper Business.

Strauss, W., and Howe, N. (1991). *Generations: The history of America's future, 1584–2069*. New York: William Morrow.

Thomas, W. C. (1981). The expectation gap and the stereotype of the stereotype: Images of old people. *The Gerontologist, 21,* 402–407.

Uhlenberg, P., & Miner, S. (1996). Life course and aging: A cohort perspective. In R. Binstock & L. George (Eds.), *Handbook of aging and the social sciences* (4th ed.). New York: Academic Press.

Uhlenberg, P., & Riley, M. W. (1996). Cohort studies. In J. E. Birren (Ed.), *Encyclopedia of gerontology* (Vol. 1, pp. 299–309). New York: Academic Press.

Political and Economic Aspects of Aging

Association for Gerontology in Higher Education. (1995). *Careers in aging: Consider the possibilities* [Brochure]. Washington, DC: Author.

Bass, S. A., Caro, F. G. & Chen, Y. P. (1993). *Achieving a productive aging society*. Westport, CT: Auburn House.

Bernheim, B. D. (1994). Adequacy of saving for retirement and the role of economic literacy. In Employee Benefit Research Institute, *Retirement in the 21st century. . . ready or not.* (pp. 73–83). Washington, DC: Employee Benefit Research Institute.

Binstock, R. (1993). Healthcare costs around the world: Is aging a fiscal 'black hole'? *Generations, 17(4)*, 37–42.

Binstock, R. H., & Post, S. G. (Eds). (1991). *Too old for health care? Controversies in medicine, law, economics, and ethics*. Baltimore: Johns Hopkins University Press.

Crossett, B. (1996, December 22). The 'oldest old,' 80 & over, are on the increase globally, *New York Times*, p. 5.

Employee Benefit Research Institute. (1994). *Retirement in the 21st century . . . ready or not.* Washington, DC: Author.

Ekerdt, D. (Guest Ed.) (1989). Retirement comes of age, *Generations* (entire issue), *13(2)*.

Gist, J. R. (Ed). (1988). *Social Security and Economic Well-Being Across Generations*. Washington, DC: American Association of Retired Persons.

Hudson, Robert B. (Ed.). (1995). The future of age-based public policy. *Generations* (entire issue), *19(3)*.

Kingson, E. R., Berkowitz, E. D., & Pratt, F. (1989). *Social security in the USA: A discussion guide to social insurance with lesson plans*. Washington, DC: Save Our Security Education Fund.

Kingson, E. R., Hirshorn, B. A., Cornman, J. M. (1989). *Ties that bind: The interdependence of generations*. Washington, DC: Seven Locks Press.

Levin, R., & Weil, J. (Eds). (1989). Business and Aging, *Generations* (entire issue), *13(3)*.

Gist, J. R. (Ed). (1988). *Social security and economic well-being across generations*. Washington, DC: American Association of Retired Persons.

Moody, H. R. (1998). *Aging: Concepts and controversies*. Thousand Oaks, CA: Pine Forge Press.

Smeeding, T. M. (1997). Economics: Individual. In J. E. Birren (Ed.), *Encyclopedia of gerontology* (Vol.. 1, pp. 455–468). New York, Academic Press.

Torres-Gil, F. (1992). *The new aging: Politics and change in America*. Westport, CT: Auburn House.

U.S. Bureau of the Census. (1995). *Statistical abstract of the United States*, Current Population Reports, P60-188, Table 748. Washington, DC: Author.

U.S. Bureau of Labor Statistics. (1995). Consumer Expenditures in 1993, Tables 168 and 718. In U.S. Bureau of the Census, *Statistical abstract of the United States*.

U.S. Social Security Administration. (1990). *Social security programs throughout the world—1989*. SSA Publication No. 13-11805., U.S. Department of Health and Human Services.

Walstad, W. B. (1997). The effect of economic knowledge on public opinion of economic issues, *Journal of Economic Education*, 195–205.

Chapter 3. How Should Content on Aging Be Presented?

Aging as a Diversity and Multicultural Issue

Banks, J. A. (Ed.). (1996). *Multicultural education, transformative knowledge and action: Historical and contemporary perspectives*. New York: Teachers College Press.

Council on Interracial Books for Children. (1976). Ageism in children's books, *Interracial Books for Children Bulletin* (entire issue), *7(6)*.

McCormick, T. M. (1994). *Creating the nonsexist classroom: A multicultural approach*. New York: Teachers College Press.

Strom, R. (1988). Intergenerational learning and curriculum development. *Educational Gerontology, 14*, 165–181.

Texas State Board of Education. (1997). *Texas essential knowledge and skills*. Austin: Author.

U.S. Bureau of the Census. (1992). Census of Population, General Population Characteristics, United States, CP-1-1, Washington, DC: U.S. Government Printing Office.

Curriculum-based Intergenerational Experiences

Angiullo, L, Whitbourne, S. K., & Powers, C. (1966). The effects of instruction and experience on college students' attitudes toward the elderly. *Educational Gerontology, 11*, 483–495.

Anspaugh, D., Walker, H., & Ezell, G. (1986). Presenting the positive view of aging to the elementary school. *Health Education, 17(1)*, 49–50.

Cairn, R. W. & Kielsmeier, J. C. (Eds.). (1991). *Growing hope: A sourcebook on integrating youth service into the school curriculum*. St. Paul, MN: National Youth Leadership Council.

Corbin, D. E., Corbin, J. M, & Barg, C. (1989). Teaching about aging in the elementary school: A one-year follow-up. *Educational Gerontology, 15*, 103–110.

Friedman, B. (1998). *Connecting generations: Integrating aging education and intergenerational programming in grades 2–8*. New York: Allyn & Bacon.

Griff, M., Lambert, D., Dellmann-Jenkins, M., & Fruit, D. (1996). Intergenerational activity analysis with three groups of older adults: frail, community-living, and Alzheimer's. *Educational Gerontology, 22*, 601–612.

Perlstein, S., & Bliss, J. (1994). *Generating community: Intergenerational partnerships through the expressive arts*. New York: Elders Share the Arts.

Chapter 4. Who Is Supporting Education for Longer Life?

White House Conferences on Aging

Center for Understanding Aging. (1995). *Schools in an aging society: Educating youth for today's families and workforce*. (Final Report on 1995 White House Mini-Conference on Aging, AoA Grant 90AM0841). Southington, CT: Author (now National Academy for Teaching and Learning about Aging).

White House Conference on Aging. (1961). *Education and Aging*. Washington, DC: U.S. Department of Health, Education and Welfare.

White House Conference on Aging. (1971). *Toward a national policy on aging: Proceedings of the 1971 White House Conference on Aging*. Washington, DC: U.S. Government Printing Office.

White House Conference on Aging. (1996). *The road to an aging policy for the 21st century*. Washington, DC: U.S. Government Printing Office.

State Departments of Education Efforts

California State Department of Education. (1978). *Handbook for instruction on aging in California public schools: Kindergarten through grade twelve*. Sacramento, CA: Author.

Connecticut Department of Education and Department on Aging. (1992). *Schools in an aging society* (six handbook series): *Elders as resource persons*; *Guide for pupil personnel specialists*; *Health/home economics classroom activities*; *Language arts classroom activities*; *Social studies classroom activities*; *Strengthening the school-community connection*. Connecticut Department of Education and Department on Aging. Available through the National Academy for Teaching and Learning about Aging.

Minnesota Department of Education. (1984). *Aging curriculum for secondary schools, 7–12*. Minnesota Department of Education and Board on Aging.

Mississippi State Department of Education. (1991). *Mississippi curriculum on aging, grades 7–12*. Mississippi State Department of Education and Administration on Aging.

Missouri Department of Education. (1992). *Promoting aging awareness among youth*. Missouri Department of Elementary and Secondary Education, University of Missouri-Columbia and Cooperative Extension at Lincoln University.

New York State Education Department. (1989). *Educational elements of a comprehensive state policy on aging*. Albany, NY: Author.

College Education and Gerontology Programs

Angelis, J. & Riesch, K. (Eds). (1989). *Aging across the curriculum*. Illinois Intergenerational Initiative, Southern Illinois University.

Atwood, H. M. (Ed.). (1975). *Activities for teaching about aging primary and intermediate grades*. Muncie, IN: Teacher Education Program on Aging, Ball State University.

Bradley, L. (1976). *Curriculum materials on aging for elementary and secondary schools*. Akron, OH: University of Akron.

Cameron, M. J. (1978). *Views of aging: A teacher's guide*. Ann Arbor, MI: Institute of Gerontology, The University of Michigan-Wayne State University.

Grant, R., Kramer, C., Marks, R., & Newman, S. (1979). *Aging awareness: An annotated bibliography*. University of Pittsburgh, Western Pennsylvania Gerontology Center.

Jacobs, H. L. (1969). *Youth looks at aging* (2nd Ed.). University of Iowa Division of Extension and University Services and Institute of Gerontology.

Jantz, R. K., Seefeldt, C., Galper, A., & Serock, K. (1976). *Children's attitudes towards the elder: Curriculum guide*. College Park, MD: Department of Early Childhood/Elementary Education, College of Education and Center on Aging. Division of Human and Community Resources, University of Maryland.

Hauwiller, J. G, Jennings, R., & Refsland, G. A. (1978). *Helping children understand aging processes: Gerontology in the elementary classroom*. Montana State University.

Lichtenstein, M. (Coordinator). (1995). *Positively aging*. Aging Research and Education Center, University of Texas Health Science Center at San Antonio.

Lucchino, R., Lane, W., Ferguson, K. D. Aging content in elementary and secondary school curriculum, *Gerontology & Geriatrics Education, 18(2)*, 37–49.

Lyons, C. (Ed.). (1982). *On growing older: Curriculum guides, grades 1-6*. Generations Together, University of Pittsburgh.

Mack, C. (Ed.) (1988). *Share it with the children: A preschool curriculum on aging instruction package*. Generations Together, University of Pittsburgh.

McCrea, J. M. (1992). *Talking with children and teens about Alzheimer's disease: A question and answer guidebook for parents, teachers and caregivers*. Generations Together, University of Pittsburgh.

Ralston, P. (1986). *Enhancing intergenerational contact*. College of Home Economics, Iowa State University.

Saxe, A. R. (1977). *The young look at the old: Curriculum building in the area of aging: A manual to assist in the development of courses on teaching about aging.* San Jose State University, Department of Recreation and Leisure Studies.

Seefeldt, C., Jantz, R. K., Serock, K., & Bredekamp, S. (circa 1980). *Young and old together: A training manual for intergenerational programs.* College of Education and Center on Aging, University of Maryland.

Smith, G R. (1978). *Teaching about aging.* Center for Teaching International Relations, University of Denver.

Spitler, B. J., Curry, H. P., Kobata, W, & Kobata, F. (circa 1990). *Project Y.E.S.: A curriculum guide for high school youth serving the frail elderly.* AoA 90 AR2191.

Local School Districts and Individual Teachers

Angelis, J., & Riesch, K. (Eds). (1989). *Aging across the curriculum.* Illinois Intergenerational Initiative, Southern Illinois University.

Alliance for Better Nursing Home Care. (1989). *Growing together: An intergenerational curriculum for preschool thru grade 6.* Providence, RI: Author.

Beall, Pamela (Ed.) (1981). *Understanding aging: A curriculum for grades K–6.* Acton, MA (Conant School): Teaching and Learning about Aging Project.

Connecticut Department of Education and Department on Aging. (1992). *Schools in an aging society: Strengthening the school-community connection.* Hartford, CT: Author.

Glasser, J. G. (Project Director) (1981). *Project concerned: Tutor's tool kit.* Napa (CA) County Schools.

Iowa State University College of Education. (circa 1980). *Enhancing intergenerational contact: Activities and resources for integrating aging education with home economics curriculum in grades 7–12.* College of Education, Iowa State University.

Lifespan Forum. (1994). *Connections: Intergenerational explorations.* Louisville, KY: Lifespan Forum.

Pearlstein, S., & Bliss, J. (1994). *Generating community: Intergenerational partnerships through the expressive arts.* Brooklyn, NY: Elders Share the Arts.

Pillemer, K., Goggin, S., Matson, S., Gerecitano, J. F., & Lassegard, E., with Raimon-Wilson, R. (1993). *Project ease.* Cornell, NY: Cornell Cooperative Extension, Cornell University.

Pratt, F. (1980). *Education for aging: A teacher's sourcebook.* Acton, MA: Teaching and Learning about Aging Project, Conant School.

Project Clasp. (1981). (Children Learning about Aging in a Structured Program): *An intergenerational approach to aging education for grades 4–8.* Rockland, MA: Rockland Public Schools.

San Diego County Department of Education. (1983). *Curriculum on aging: An intergenerational program for grades K–6.* San Diego County, CA: Author.

Texas Tech University Home Economics Curriculum Center. (1994). *Interactions between children and the elderly: Intergenerational curriculum and training modules.* Lubbock, TX: Texas Tech University.

Walford, L. J. (1981). *Building intergenerational relationships: Creative activities for children and older adults.* Los Angeles: Institute for Dance and Experimental Art.

Woodward, Karla. (1994). *Intergenerational service learning: A handbook for designing, implementing, and evaluating intergenerational service learning programs.* Topeka, KS: Kansas Intergenerational Network.

Professional Education and Aging Organizations

Alzheimer's Disease and Related Disorders Association of Eastern Massachusetts, Inc. (1993). *Someone I love has Alzheimer's disease.* Cambridge, MA: Author.

King, David C. (Ed.) (1981, June). Global aging trends and education. *Intercom* (entire issue), New York: Global Perspectives in Education.

New York State Office for the Aging. (circa 1991). *A teenager's guide to caregiving*, Albany, NY: Author.

Pratt, F. E. (1977). *Teaching about aging*: Boulder, CO: ERIC Clearinghouse for Social Studies & Social Science Education Consortium.

Ulin, Richard O. (1982). *Teaching and learning about aging*. Washington, DC: National Education Association.

Wisconsin Office on Aging (1986, November). *Books for grandchildren and great-grandchildren* [Brochure]. Madison, WI: Author.

Publishers, Businesses, and News Agencies

"Aging in America," *Newsweek* NewSource Unit, 1998.

Churchill, E. R., & Churchill, L. R. (1978). *Activities for studying the process of aging*, Portland, ME: Weston Walch.

Cole, W. E., and Harris, D. K. (1977). *The elderly in America*. Boston: Allyn & Bacon.

Episcopal Society for Ministry on Aging. (circa 1980). The meaning of aging for all ages. (mimeographed curriculum materials).

Fischer, S. J. and Montgomery, Jr., R. A. (Eds.). (1971). *Yes, but not here: An educational simulation*. New York: Macmillan.

Friedman, B. (1998). *Connecting generations: Integrating aging education and intergenerational programming in grades 2–8.* New York: Allyn & Bacon.

Heller, H. (1979). *Change of pace: Understanding the aging process*. Santa Rosa, CA: Davos-Laret Books.

MacDonald, B. D. (1993). *It's fun to grow old*. East Hanover, NJ: Sandoz Pharmaceuticals Corporation.

McPhail, P., Ungoed-Thomas, J. R., & Chapman, H. (1975). *Lifeline*. Niles, IL: Argus Communications.

Norris, M. W. (Ed.). (1983, January). *Yesterday, today & tomorrow: Interdependent generations*. New York: J. C. Penney Forum.

Robbin, A. (1982). *Aging: A new look*. Circle Pines, MN: American Guidance Service.

Schirmer, M. A. (1983). *Understanding and appreciating the aging: A handbook for elementary teachers*. Catholic Church Office for Services to the Aging, Archdiocese of Kansas City in Kansas.

Schirmer, M. A. (1984). *Understanding and appreciating the aging: A handbook for secondary teachers*. Catholic Church Office for Services to the Aging, Archdiocese of Kansas City in Kansas.

Vento, C. J. (1980). *Of time and value: A learning activity handbook on aging*. Buffalo, NY: D.O.K. Publishers.

WCNY-TV. (1984). *Old enough to care*, Liverpool, NY: WCNY-TV/FM Syracuse, NY.

Zins, S. (1988). *The young and the old: A sourcebook on aging*. Portland, ME: J. Weston Walch.

Appendix A

Glossary of Common Terms Related to Aging

The following terms related to aging could be used in the development and evaluation of K–12 curriculum and instructional materials. Young people need at least some exposure to this vocabulary during their elementary and secondary education. Some terms deserve more attention, especially those that are central to the basic concepts identified in chapter three. Students will be able to apply the working vocabulary in making decisions in their personal and family lives, and as contributing members of society throughout their adult years.

Acute condition An illness or injury that is expected to be temporary. Compare with chronic condition.

Administration on Aging (AoA) A division of the U.S. Department of Health and Human Services established in 1965 under the Older Americans Act. AoA administers key programs at the Federal level that are mandated under various titles of the Older Americans Act. It works through its nationwide network of Regional offices and State and Area Agencies on Aging to plan, coordinate, and develop services for older persons. It collaborates with other federal agencies on programs and resources, such as housing and transportation, for older adults. See Area Agencies on Aging.

Adult Day Services A program for functionally impaired adults that provides a variety of health, social, and related support services in a community-based setting during part of a day, but fewer than 24 hours.

Age Discrimination The practice of treating people (especially older people) differently on the basis of age, as in failure to hire a job applicant or promote an employee because of age.

Age Discrimination in Employment Act (ADEA) Legislation in the United States to "promote employment of older persons based on their ability rather than age." The act covers persons aged 40 to 70.

Age Grade Position in society according to age group which may carry with it a particular role or set of socially expected behaviors. May also be referred to as "age status."

Aged A term sometimes used as an adjective to describe the condition of being old, or as a noun to designate people who have become old. The collective expression "the aged" is often used to persons over age 65, although it tends to homogenize older adults who are a heterogeneous group.

Ageism Negative stereotyping and systematic devaluation of people based on their ages, especially in reference to older people.

Aging The life-long process of growing older; not just a later life experience.

Alzheimer's Disease The most common form of dementia. A degenerative disease that attacks the brain and results in impaired memory, thinking, and behavior. The prevalence of Alzheimer's disease increases with age. Although it can occur in people in their 40s and 50s, it is more commonly diagnosed in people in their 80s. See dementia.

Area Agency on Aging An agency that, under the Administration on Aging (see above), plans and coordinate services to older Americans within a specific geographic region, usually a section of a state.

Assisted Living Facilities Private apartments that provide a range of supportive services, such as meals, personal care, social activities, and on-site supervision.

Baby Boom Cohort People who were born between 1946 and 1964, during the post-World War II period when the birth rate in the United States increased, producing about 76 million people.

Beneficiary Someone who receives a benefit, such as a worker who receives Social Security benefits or a survivor who receives insurance benefits upon the death of a parent or spouse.

Birth Rate Commonly stated as the ratio between number of live births within a given year per 1,000 persons in the total population. (The fertility or reproductive rate is the ration of live births per number of women in reproductive ages that are born within a given year.)

Caregivers, Formal Professionals and semi-professionals such as physicians, nurses, social workers, and home-care providers, who care for older persons in a variety of settings.

Caregivers, Informal Family members or close associates with primary responsibility for giving care, or seeing that care is given, to those unable to fully care for themselves.

Catastrophic Illness A sudden and devastating illness that impairs one's ability to live a normal life and is usually very costly to treat.

Chronic condition A physical or mental illness or disability that is permanent or persists over a long period of time. Compare with acute condition.

Cohort A set of people born during a specific time period; also a set of people born during a historical era that creates different intercohort characteristics such as size, composition, experiences, and values.

Cost of Living Adjustment (COLA) An adjustment in a pension or entitlement (such as Social Security) to compensate for inflation or increase in the cost of living.

Death Rate Commonly stated as the ratio between the number of who die within a given year per 1,000 persons in the total population. Death rates can be stated for specific diseases and for specific age groups.

Dementia A syndrome characterized by a decline in intellectual functioning. May be caused by more than 70 diseases, the most common being Alzheimer's Disease.

Demography The study of population and population change, including but not limited to such factors as births, deaths, migration, length of life, and age structure of populations.

Elder Loosely used to refer to people who are older, but in many traditional cultures refers to an older person whose age and experience command respect.

Elder Abuse Harmful behavior directed toward older persons by caregivers upon whom the older person depends for assistance.

Elderly A term used for older adults. Commonly associated with frailty and dependence. See older adults.

Entitlement A financial benefit based on an earned or legal right established in the law (e.g., a Social Security benefit earned by working and paying taxes over a period of time).

Generation Though popularly used as a synonym for cohort, the term is also applied within the context of the family. Children form one generation, their parents another, their grandparents a third, and so on.

Geriatrics The branch of medicine specializing in the health care and treatment of older persons. It is defined by the World Health Organization as the branch of medicine that is concerned with the health of older adults in all aspects: preventative, clinical, remedial, rehabilitative, and continuous surveillance.

Gerontology The multidisciplinary study of all aspects of aging, including health, biological, sociological, economic, behavioral, and environmental.

Gerontologists Professionals working in the field of gerontology. However, many whose work is related to aging identify themselves in terms of their profession such as social workers and physicians.

Gerontophobia Fear of aging in general, and especially of one's own aging.

Home Care Provision of care to people in their homes, rather than in institutional settings such as nursing homes or hospitals.

Intergenerational Any connection or involvement of two or more generations. Other terms used are cross-generational and multigenerational.

Life Course Sequence of events people experience and roles they occupy as they move through life. Accumulated individual differences in the life course create greater differentiation among older persons than younger persons.

Life Cycle The genetically prescribed course followed by all living organisms, including humans, from conception to death through stages of development and change.

Life Expectancy A statistical prediction or estimate based on a set of age-specific death rates of how long persons at a given age can be expected to live on average.

Life Review A later life developmental task of recalling and evaluating memories that can result in resolution, acceptance, integration of past conflicts. Technically different from autobiography, oral history, or reminiscence, which do not have the same degree of evaluation and synthesizing. See reminiscence.

Lifespan Period of time during which an organism or species can remain alive under normal or optimum conditions. (Currently most often spelled as two words, but also spelled as one word by some authors and publishers.)

Lifespan Development Sequential developmental changes in individuals over the entire lifespan.

Life Stages Broad categories based on the effects of aging, such as infancy, childhood, adolescence, middle age, and old age.

Life Table Numerical tables that show the life expectancy for different age groups in the population.

Living Will A document by which people specify in advance what they do or do not want (especially regarding medical care) in the event that, if close to death, they are too ill to make decisions or make them known.

Long Term Care Care given over a long period of time for people with chronic or long term illnesses or disabilities that prevent living independently; can be community-based care or institutional care such as in nursing homes.

Longevity Actual length of life.

Mature Market American consumers, age 50+, with diverse values, attitudes, lifestyles and behaviors, with different cohort and developmental perspectives from younger market groups.

Medicaid A public assistance program of medical coverage for low income people of all ages.

Medicare A federal entitlement program of medical insurance for persons age 65 and over provided through the Social Security system. Covers mostly acute health care needs.

Menopause The time of life when a woman ceases to menstruate and can no longer become pregnant, usually about age 45 to 50.

Middle Age A conceptual stage of life between young adulthood and old age that has no specific boundaries in terms of age.

Nursing Home A residential facility in which skilled nursing care is available for people with long-term medical conditions or disabilities that require continuous care. Provides both personal and medical care, such as administration of medication. Different from Personal Care Homes and Assisted Living Facilities.

Old Age A popular term for the end stage of life, but has no specific boundaries in terms of age. Historically, the term has often been used to refer to persons aged 65 or older. Since the number of years people live after age 65 may extend to 30 or more years, this period is sometimes divided into sub-groups, such as young-old, mid-old, old-old, and oldest-old.

Older Adults A broad term used for persons in later life that has fewer stereotypical associations than other terms used for the older population.

Older Americans Act Legislation that created a national network of services and programs for older persons, along with research, training, and model projects related to older persons.

Old-Old/Oldest Old A subcategory for the oldest of the older population, usually defined as persons aged 75 and older, and 85 and older, respectively.

Pension Income received by a retiree or survivor, as a result of employed services for a minimum number of years before retirement.

Personal Care Homes A facility that provides meals, housekeeping, and assistance with dressing or bathing. Does not provide nursing or medical care as in the case of nursing homes.

Population Aging Changes in the age structure of a population, measured by increasing median age of the population and increasing proportion of persons in older age groups.

Public Policy A government approach or course of action on a public matter, such as health, education, or housing.

Reminiscence Process of recalling past events and experiences. See life review.

Respite Care Short-term care in a facility for someone needing personal assistance which provides relief for an informal caregiver and may avoid long-term institutionalization.

Retirement Period or life stage following termination of and withdrawal from a regular job and from income from employment. Difficult to delimit because some older persons retire from one job and take another full or part-time job.

Rite of Passage A ceremony (e.g., bar mitzvah or marriage) or event (e.g., high school graduation, birth of first child) that signals the start of a new status or stage of life.

Senility A generalized term colloquially used to refer to loss of mental ability inaccurately thought to be due to age. The term is not used as a general expression in professional publications.

Social Security A social insurance program by which workers protect themselves, their dependents, and survivors from possible loss of income due to disability, retirement and death. Formally known as the Old Age, Survivors and Disability Insurance (OASDI). While it provides benefits to survivors and disabled people, it is often used by the general public to refer to retirement benefits.

Supplemental Security Income (SSI) A means-tested public assistance program that provides income to low-income people who are not fully able to support themselves. Administered by the Social Security Administration, but not be confused with the social insurance program for retired workers.

Young-old A subcategory used for the youngest of the older population, with an age range usually defined as between approximately 65 and 74.

Widowhood Life stage of a formerly married woman (widow) or man (widower) whose spouse has died.

Appendix B
General Learning Objectives about Aging

Education for long life involves three major areas of focus: attitudes, aging processes, and issues of an aging society. Below are a set of suggested goals for each of these areas of focus. The goals are stated as learning objectives that can serve as guides for developing curriculum and instructional materials.

Attitudes

1. Perceive long life as an opportunity for continuous growth and development, not simply as a late life process of decline.
2. Recognize the unique individuality of all people as they grow and mature.
3. Appreciate the roles that older people can and do play as human resources in service to others.
4. Understand ageism and the harmful consequences of age prejudice and discrimination.
5. Recognize that the quality of life for people of all ages depends largely on choices made by the individual and the society.

Aging Processes

1. Comprehend aging as a continuous lifelong process of growing up and becoming older.
2. Recognize one's own potential for long life.
3. Understand the aging process as a complex interaction of genetic, life style, and environmental factors.
4. Recognize that personal choices about mental and physical health habits affect the quality and length of life.
5. Recognize that the way people age involves a complex interplay of physical, psychological, and social factors.
6. Understand the relativity of the terms "young" and "old."

Aging Society

1. Understand that advances in nutrition, medicine, and health care have made it possible for most people to live longer lives.
2. Know that growing longevity is increasing the number and percentage of older people in the population.

3. Recognize that an aging population creates changing economic and social circumstances that demand intelligent and informal decisions by individuals and society.
4. Understand that growing longevity presents opportunities and challenges.
5. Appreciate that individuals and society can alter their behavior and policies in ways that improve the quality of life for all generations.
6. Understand that positive relationships are necessary to meet the demands of multigenerational families and societies.

Appendix C
Sample Classroom Activities

The following are suggestions for how lifespan and aging concepts can be integrated into classroom instruction. This list was originally published in 1997 by the National Retired Teachers Association and National Academy for Teaching and Learning about Aging in *Teaching about Aging: Enriching Lives across the Life Span*. Classroom teachers can use these ideas to trigger other creative activities that best suit their curriculum objectives and students' needs.

Elementary Level

Language Arts and Social Studies

1. Help young students develop concepts of "young, younger, youngest" and old, older, oldest" by asking them to apply these terms to pictures of familiar things, such as houses, pets, trees, cars, and people.
2. Ask young students to make a list of activities they can or cannot do now. Have them examine the list for activities they can or cannot do when they grow older. Discuss growing older as a process of growth, development, and change.
3. Develop a list of basic vocabulary related to aging, growth, and development. Have students make flash cards with their definitions and write sentences using the terms correctly.
4. Invite older volunteers to visit class to read and discuss books that are not about growing old.
5. Organize a pen pal program between children and older community residents. After a period of time, invite the older adults to class to meet their pals.

6. Replace ageist children's books with books that provide a balanced view of aging and older people.

Math

1. Develop a timeline showing the ages of students and their siblings, parents or guardians, grandparents and great-grandparents.
2. Practice subtraction by asking students to subtract their age from the current year resulting in their birth year. Repeat the exercise with students using the birth year of familiar adults such as teachers or family members (preferably who do not try to hide their age as if it is something to be ashamed of).
3. Practice multiplication by asking students to figure out how many seasons or months they and others have lived.

Physical Education

1. Invite older volunteers to physical education classes to teach young students physically active games that they played in their own childhood, such as jacks, tag, dodge ball and hop scotch. Then have older persons explain or demonstrate what they do now for physical activity, such as dance, tennis, gardening, and racketball.

Secondary Level

The Arts

1. Show students how to draw persons of different ages, using examples of older persons in social contexts with various activities and expressions.
2. Provide students with a list of long-lived artists, poets, musicians, photographers, architects, dancers, or actors. Have students note the age at which important accomplishments were made. Include historical figures like Grandma Moses and Michaelangelo along with contemporary celebrities.
3. Invite older artists to class to display, discuss, and demonstrate techniques of their art form.
4. Have small groups of students develop hypothetical, but realistic problem situations between youths and elders at home or at work, then act out mini-dramas in which they present the problems and their proposed solutions.

5. Create one or more workshops led by artists in which younger and older people join in learning a new art form, then publicly display their talent through a community art show, photo exhibit, poetry reading, or a performance on stage.

Business Education

1. Invite a housing developer, travel agent, and home care provider to explain what they do to meet the needs of older and younger persons.
2. Demonstrate and practice effective customer service communication practices when working with older customers.
3. Discuss possible cases of age discrimination in the workplace and how to avoid them.
4. Ask students to develop a non-ageist advertisement for a service or product that could be used by older adults.

Health Education, Science, and Family and Consumer Sciences (Home Economics)

1. Have students diagram the life cycles of several different species, such as flies, salmon, horses, and sea turtles. Show their stages of life and how much of the total lifespan is devoted to each stage. Compare these to humans and discuss implications.
2. Have students list ways major systems and organs of the body are affected with age when a person follows good health habits as opposed to poor health habits. Differentiate between the effects of age and the effects of disuse, disease, and injury.
3. Explore potential careers in which scientific knowledge about aging would be needed.
4. Discuss reasons for hearing loss, such as the potential dangers of loud concerts, machines, and headphones.
5. Have students practice good communication techniques with persons who are hearing impaired.
6. Ask students to research ways in which scientific advancements such as food production, nutrition, sanitation, and medical technology, have increased life expectancy.
7. List and compare chronic and acute diseases commonly associated with younger and older persons. Emphasize that diseases are not a normal part of aging and that medical science is seeking cures for what was once considered inevitable during later life.

8. Invite community health and social service professionals to explain resources for persons of different ages.
9. Invite local health professionals to explain what young people can do to avoid health problems in later life.
10. Have students research and select an Elderhostel program and/or Adventure Travel for 50+ they would like to take when they are older adults.

Language Arts

1. Assign literature involving intergenerational relationships and discuss how these relationships compare to the experiences of those in the class.
2. Compare older characters in popular fairy tales and nursery rhymes with contemporary cartoons and television programs.
3. Have students interview older people, take notes of the interview, and then use the notes to write character sketches of the persons interviewed.
4. Compare older characters in classic literature with contemporary images of aging. Discuss how story plots and character development might be different in a modern setting.
5. Identify in contemporary movies examples of interesting or overly-stereotyped older adults.
6. Practice non-ageist journalism when writing about events involving older adults.
7. Discuss connotations of words used to name or describe older adults, such as the elderly, senior citizens, golden agers, and older adults.

Mathematics, Economics

1. Compare the total capital at age 65 of some total dollars invested beginning at age 25 versus at age 45.
2. Use problem-solving exercises on spending and savings that older and younger persons might experience.
3. Use other age-related data, such as age demographics, changing lifespan, or Social Security finances, to devise problems by which students simultaneously practice math skills and learn about aging.
4. Take students to an old cemetery to gather data for constructing graphs of birth and death rates. Have students note changes over time and possible implications of the data.

Physical Education

1. Invite healthy, active retired athletes to class to discuss any limitations their health changes have placed on their abilities and how they work with limitations to maintain active lives.

2. Invite speakers from Senior Olympics or senior ski clubs to teach students fitness exercises. Invite nursing home residents or physical therapists to demonstrate appropriate fitness exercises for persons with physical disabilities.

Social Studies

1. Have students research how certain major acts of Congress, such as the Social Security Act, Older Americans Act, or Age Discrimination in Employment Act, have affected the lives of older Americans.
2. Have students learn about the legislative process by tracing a major bill having to do with aging from introduction in the House or Senate until its passage or defeat.
3. Introduce and explore the topics of ageism (age prejudice) and gerontophobia (fear of aging) by gathering and analyzing advertisements, cartoons, comic strips, birthday cards, book illustrations, and common sayings.
4. Introduce the concept of cohort differences by inviting retirees of different ages to discuss their experiences during momentous historical periods of change such as war, immigration, economic recession, and the civil rights movement.
5. Have students compare the roles of older adults in various cultures in the United States and other countries.

Technology Education

1. Have students investigate ways businesses are using technology to market to older adults.
2. Invite older adults who belong to computer using groups to discuss how computer technology has changed the way they communicate and/or do business.
3. Create a pen-pal program by e-mail with older adults who are on the Internet.
4. Have students practice accessing information over the Internet by locating resources and organizations serving older adults.
5. Discuss ways in which new technology can help persons of all ages with hearing and vision loss.

Appendix D
Additional Resources

Encyclopedias, Handbooks, Bibliographies

American Association of Retired Persons. (1991). *Thesaurus of aging terminology* (4th Ed.). Washington, DC: National Gerontology Resource Center, Author.

Bailey, W. G. (1987). *Human longevity from antiquity to the modern lab: A selected annotated bibliography*. Westport, CT: Greenwood Press.

Binstock, R. H., & George, L. K. (Eds.). (1995). *The handbook of aging and the social sciences.* (4th Ed.). New York: Academic Press.

Birren, J. E. (Ed.). (1996). *Encyclopedia of gerontology: age, aging, and the aged*. New York: Academic Press.

Birren, J. E., & Schaie, K. W. (Eds.). (1996). *The handbook of the psychology of aging* (4th Ed.) New York: Academic Press.

Birren, J. E., Sloane, R. B., & Cohen, G. D. (Eds.). (1992). *Handbook of mental health and aging* (2nd Ed.). New York: Academic Press.

Blieszner, R., & Bedford, V. H. (Eds.). (1996). *Handbook of aging and the family*. Westport, CT: Greenwood Press.

Cole, T. R. (Ed.). (1992). *Handbook of the humanities and aging*. New York: Springer Publishing.

Hampton, R. R. (1992). *The encyclopedia of aging and the elderly.* New York: Facts on File.

Johnson, T. F., & Solomon, J. C. (1995). *Aging well: A selected annotated bibliography*. Westport, CT: Greenwood Press.

Kausler, D. H. (1996). *The graying of America: An encyclopedia of aging, health, mind and behavior*. Urbana: University of Illinois Press.

Maddox, G., & Lawton, P. (Ed.). (199x). *Encyclopedia of aging* (2nd Ed.). New York: Springer Publishing.

Manheimer, R. (Ed.). (1994). *Older Americans almanac: A reference work on seniors in the United States*. Detroit: Gale Research.

McLerran, J. (1991). *Old age in myth and symbol: A cultural dictionary*. New York: Greenwood Press.

Mitchell, S. (1995). *The official guide to the generations: Who they are. How they live. What they think*. Ithaca, NY: New Strategist Publications.

Mori, M. (1991). *Women and aging: An annotated bibliography, 1986–1991*. Vancouver, B.C.: Gerontology Research Center, Simon Fraser University.

Porchino, J. (1991*). Growing older, getting better: A handbook for women in the second half of life*. New York: Continuum.

Schnick, R. (Compiler). (1994). *Handbook on aging Americans, 1993–1994*. Phoenix, AZ: Oryx Press.

Williams, M. E. (1995). *The American Geriatrics Society's complete guide to aging and health.* New York: Harmony.

Yahnke, R. E. (1990). *Aging in literature: A reader's guide*. Chicago: American Library Association.

Special Issue Journals

Ekerdt, D. (Ed.). (1989). Retirement comes of age. *Generations* (entire issue), *13(2)*.

George, L. K., & Clipp, E. (Eds.). (1991). Aging well. *Generations* (entire issue), *15(1)*.

Hudson, R. B. (Ed.). (1995). The future of age-based public policy. *Generations* (entire issue), *19(3)*.

Kastenbaum, R. (Ed.). (1991). Creativity in later life. *Generations* (entire issue), *15(2)*.

Levin, R., & Weil, J. (Eds.). (1989). Business and aging. *Generations* (entire issue), *13(3)*.

Seltzer, M. M., & Kunkel, S. (Eds.). (1995). What it means to be a professional in the field of aging. *Generations* (entire issue), *19(2)*.

Shenk, D., & Achenbaum, W. A. (Eds.). (1993). Changing perceptions of aging and the aged. *Generations* (entire issue), *17(2)*.

Sokolovsky, J. (Ed.). (1993). Images of aging: A cross-cultural perspective. *Generations* (entire issue), *17(3)*.

Stanford, E. P., & Torres-Gil, F. M. (Eds.). (1991). Diversity: New approaches to ethnic minority aging. *Generations* (entire issue), *15(4)*.

Torres-Gil, F. M. (Ed.). (1998). Public policy. *Generations* (entire issue), *12(3)*.

Other Recent Books

Aiken, L. R. (1995). *Aging: An introduction to gerontology*. Thousand Oaks, CA: Sage Publications.

Alan, J., & Pifer, A. (Eds.) (1993). *Women on the front lines: Meeting the challenge of an aging American*. Washington, DC: Urban Institute Press.

American Society on Aging. (1992). *Serving elders of color: Challenges to providers and the aging network*. San Francisco: Author.

Beers, M. H., & Urice, S. K. (1992). *Aging in good health*. New York: Pocket Books.

Belsky, J. K. (1998). *The psychology of aging: Theory, research, and practice* (3rd Ed.). Monterey, CA: Brooks/Cole Publishing.

Berg, R. L., & Cassells, J. S. (Eds.). (1992). *The second fifty years: Promoting health and preventing disability*. Washington, DC: National Academy Press.

Bortz, W. M. *Dare to be 100*. (1996). New York: Simon & Schuster.

Brody, E. M. (1990). *Women in the middle: Their parent-care years*. New York: Springer Publishing.

Bull, N. C. (1993). *Aging in rural America*. Newbury Park, CA: Sage Press.

Butler, R. N., & Brody, J. A. (Eds.). (1995). *Delaying the onset of late-life dysfunction*. New York: Springer Publishing.

Butler, R. N., & Lewis, M. (1993). *Love and sex after 60*. New York: Ballantine Books.

Butler, R., Oberlink, M. R., & Schechter, M. (Eds.). (1990). *The promise of productive aging: From biology to social policy*. New York: Springer Publishing.

Cairn, R. W., & Kielsmeier, J. C. (Eds.). (1991). *Growing hope: A sourcebook on integrating youth service into the school curriculum*. St. Paul, MN: National Youth Leadership Council.

Cattell, A., & Catell, M. (1993). *Old age in global perspective*. New York: Macmillan.

Cole, T. R. (1992). *The journey of life: A cultural history of aging in America*. New York: Cambridge University Press.

Crews, D. E., & Garruto, R. M. (Eds.) (1994). *Biological anthropology and aging: Perspectives on human variation over the life span*. New York: Oxford University Press.

Cutler, N. E., Gregg, D. W. & Lawton, M. Pl. (1992). *Aging, money, and life satisfaction: Aspects of Financial Gerontology*. New York: Springer Publishing.

Day, Ch. L. (1990). *What older Americans think: Interest groups and aging policy*. Princeton, NJ: Princeton University Press.

Doress, P. B. & Laskin, D., & the Midlife and Older Women Book Project. (1997). *Ourselves, growing older*. New York: Simon Schuster.

Dychtwald, K, & Flower, J. (1989). *Age wave: The challenges and opportunities of an aging America*. Los Angeles: Jeremy P. Tarcher.

Finch, C. E. *Longevity, senescence, and the genome*. (1990). Chicago: University of Chicago Press.

Friedan, B. (1993). *The fountain of age*. New York: Simon & Schuster.

Fries, J. F. (1989). *Aging well: The life plan for health and vitality in your later years*. New York: Addison-Wesley.

Haynes, W. F. (1994). *Minding the whole person: Cultivating a healthy lifestyle from youth through the senior years*. Chicago: Loyola.

Hayflick, L. (1996). *How and why we age*. New York: Ballantine.

Hooyman, N. R. (1993). *Social gerontology: A multidisciplinary perspective* (3rd ed.). Boston: Allyn & Bacon.

Jackson, J. S. (1993). *Aging in black America*. Newbury Park, CA: Sage.

Keyfitz, N. (1990). *World population growth and aging: Demographic trends in the late twentieth century*. Chicago: University of Chicago Press.

Lopata, H. Z. (1996). *Current widowhood: Myths and realities*. Thousand Oaks, CA: Sage Publications.

Ludwig, F. C. (1991). *Life span extension—Consequences and open questions*. New York: Springer Publishing.

Minkler, M., & Roe, K. M. (1993). *Grandmothers as caregivers: Raising children of the crack cocaine epidemic*. Newbury Park, CA: Sage Publications.

Minois, G. (1989). *History of old age: From antiquity to the Renaissance*. Chicago: University of Chicago Press.

Medina, J. J. (1996). *The clock of ages: Why we age, how we age, winding back the clock*. New York: Cambridge University Press.

Papalia, D. E. (1996). *Adult development and aging*. New York: McGraw-Hill.

Perlstein, S. & Bliss, J. (1994). *Generating community: Intergenrational partnerships through the expressive arts*. New York: Elders Share the Arts.

Posner, R. A. (1995). *Aging and old age*. Chicago: University of Chicago Press.

Pratt, M. W. (1994). *The social psychology of aging: A cognitive perspective*. Cambridge, MA: Blackwell.

Schulz, J. H. (1991). *Economics of population aging: The "graying" of Australia, Japan and the United States*. New York: Auburn House.

Strauss, W. and Howe, N. (1991). *Generations: The history of America's future, 1584–2069*. New York: William Morrow.

Thorson, J. A. (1995). *Aging in a changing society*. Belmont, CA: Wadsworth Publishing.

United Seniors Health Cooperative. (1993). *Finances after 50: Financial planning for the rest of your life*. New York: Harper Collins.

U.S. Bureau of the Census. (1996). *65+ in the United States*, Current Population Reports, Special Studies, Series P23-190. Washington, DC: U.S. Government Printing Office.

Williams, M. E. (1995). *The American Geriatric Society's complete guide to aging and health*. New York: Harmony Books.

On-Line Sources

Careers in Aging
  Association of Gerontology in Higher Education http://www.aghe.org/ciastart.htm

Current Events
  Third Age News Service http://headlines.yahoo.com/gsn

Demographic Information

National Aging Information Center	http://pr.aoa.dhhs.gov/naic/
U.S. Administration on Aging	http://pr.aoa.dhhs.gov/aoa/stats/aging21/
U.S. Census Bureau	http://www.census.gov/

Financial, Legal, Housing

Guide to Retirement Living	http://www.retirement-living.com
Jump$tart Coalition for Personal Financial Literacy	http://www.jumpstartcoalition.org
Social Security Administration (see Kids', Teens', and Teachers' pages)	http://www.ssa.gov/SSA_Home.html

Health

Alzheimer's Association	http://www.alz.org
Center for Disease Control	http://www.cdc.gov
CDC Health and Fitness Resources	http://www.cdc.gov/nccdphp/dnpa/readyset/paresour.htm
CDC Health Facts for Young People	http://www.cdc.gov/nccdphp/dash/phactfac.htm
National Institute on Aging	http://www.nih.gov/nia
National Institutes on Health (See health information index.)	http://www.nih.gov/health
Yahoo Health Headlines	http://dailynews.yahoo.com/headlines/health

General Information

AARP Andrus Foundation	http://www.andrus.org
American Association of Retired Persons	http://www.aarp.org

International information

Age Concern, United Kingdom	http://www.ace.org.uk/
AARP International site	http://www.aarp.org/intl/
Link Age 2000	http://library.advanced.org/10120/
U.S. Administration on Aging international links	http://www.aoa.dhhs.gov/international/

Organizations

Administration on Aging

330 Independence Avenue SW
Washington, DC 20201
202/619-7501 or 800/677-1116

An agency of the Department of Health and Human Services, that develops federal programs and community services for older adults. See National Information Center below.

American Association of Retired Persons
601 E Street NW
Washington, DC 20049
202/434-2277

A nonprofit organization with members age 50 and over; offers a range of membership benefits, educational and community service programs carried out through a national network of volunteers. Its magazine, *Modern Maturity*, is one of the most widely circulated in the United States.

Association for Gerontology in Higher Education
1030 15th Street, NW, Suite 240
Washington, DC 20005-1503
202/289-9806

Has print and audio materials on careers in aging; publishes brief annotated bibliographies on aging topics, including *Teaching about Aging for Children and Youth, Employment and Aging, Older Persons and the Family, The Older Volunteer, Aging in Literature.*

American Society on Aging
ASA Public Education Program
833 Market Street, Suite 512
San Francisco, CA 94103-1824
Phone 415/974-9600; Fax 415/974-0300

The ASA is a nonprofit, membership organization for public and health professionals. Its quarterly journal *Generations* takes a theme about issues affecting older persons and approaches to meet their needs.

Elderhostel
11 Avenue de LaFayette
Boston, MA 02111-1746
617/426-7788

A nonprofit organization that sponsors educational programs for older adults.

Generations United
122 C Street, NW, Suite 820
Washington, DC 20001
202/638-1263

A national coalition dedicated to intergenerational policy, programs, and issues.

Gerontological Society of America
1030 15th Street, NW, Suite 250
Washington, DC 20005
202/842-1275

Publishes a monthly newsletter, *Gerontology News*, and two bimonthly journals, *The Gerontologist* and the *Journal of Gerontology*. Sponsors National Academy on Aging, which occasionally issues fact sheets on aging topics for classroom use.

Gray Panthers
733 15th Street, NW, Suite 437
Washington, DC 20005
202/737-6637 or 800/280-5362

A nonprofit advocacy group that works to eliminate ageism and age discrimination.

National Academy for Teaching and Learning about Aging
University of North Texas
P.O. Box 310919
Denton, TX 76203-0919
940/565-3450; fax 940/565-3141

Promotes K–12 education and teacher preparation about aging-related topics through a variety of educational resources and services.

National Aging Information Center
Administration on Aging
330 Independence Ave., SW, Rm 4656
Washington, DC 20201
202/619-7501; fax 202/401-7620

NAIC is the central source on a variety of program and policy materials on aging and statistical data.

National Association for Hispanic Elderly
Asociacion Nacional Pro Personas Mayores
234 E. Colorado Boulevard, Suite 300
Pasadena, CA 91104
213/487-1922

Nonprofit organization to improve the quality of life for older Hispanic citizens.

National Caucus and Center on Black Aged
1220 L. Street, NW, Suite 800
Washington, DC 20005
202/637-8400

Nonprofit organization to improve the quality of life for older African Americans.

National Council on Aging
409 Third Street, SW, Suite 200
Washington, DC 20024
202/479-1200. 202/479-0735

National Center for Health Statistics
6525 Belcrest Road
Hyattsville, MD 20782-2003
301/458-4636

Part of the Centers for Disease Control of the Public Health Service; collects and distributes data on health in the United States.

National Family Caregivers Association
10400 Connecticut Avenue, Suite 500
Kensington, MD 20895-3944
800/896-3650

A non-profit membership organization to provide information for family caregivers.

National Hispanic Council on Aging
2713 Ontario Road NW
Washington, DC 20009
202/265-1288

A nonprofit organization that promotes the well-being of older Hispanics.

National Indian Council on Aging
10501 Montgomery Boulevard, NE, Suite 210
Albuquerque, NM 87111-3846
505/292-2001

A nonprofit organization to promote social service programs for older Indians and Alaskan Native Americans.

National Institute on Aging
Public Information Office
9000 Rockville Pike
Building 31, Room 5C26
Bethesda, MD 20892
301/496-1752; 800/222-2225

Part of the National Institutes of Health; supports research related to aging processes; disseminates *Age Page* documents on specific health issues of older persons.

National Asian Pacific Center on Aging
1511 Third Avenue, Suite 914
Seattle, WA 98101-1626
206/624-1221

Promotes health care and social services to older members of the Pacific/Asian Community in the United States.

National Retired Teachers Association
Division of AARP
601 E Street NW
Washington, DC 20049
202/434-2277

A division of the American Association of Retired Persons with the nation's largest group of retired educators with a membership of 1.2 million. It links members with a network of 50 state and over 2,700 city and local retired educators' associations.

Older Women's League
666 11th Street NW, Suite 700
Washington, DC 20001
202/783-6686; 800/825-3695

Educates the public on concerns of middle-aged and older women.

SeniorNet
121 Second Street, 7th Floor
San Francisco, CA 94105
415/495-4990

A nonprofit educational organization promoting computer online networks for older adults.

Social Security Administration
Office of Public Inquiries
6401 Security Boulevard, Room 4200
Baltimore, MD 21235
410/965-1720; 800/772-1213

Responsible for the Social Security retirement, survivors, and disability insurance program, and the Supplemental Security Income program.

U.S. Bureau of the Census
Age and Sex Statistics Branch
Population Division
Washington, DC 20233
301/457-4608

Has demographic information based on U.S. Census data.

Appendix E
For Reflection and Discussion

This publication may be used for teacher inservice and college education courses. The following questions, which correspond to chapters, can be modified for purposes of individual assignments, group discussions, and preparation for curriculum development.

Chapter 1. Why Education for Longer Life?

1.1 What are five different reasons why students should have the opportunity to learn about aging?

1.2 What do you think is the most compelling reason why K–12 schools need to integrate aging and lifespan issues into their curricula? Explain.

1.3 Give examples from the news media of information or images about aging-related issues you have seen recently. How might such current events relate to young people?

1.4 Go to a grocery or drug store to look at birthday cards. What are the general themes? If race or sex were substituted for age in the cards, what would be the effect?

1.5 Based on research findings, how would you describe the status of aging-related content in children's literature and textbooks?

1.6 Review K–12 materials used in your school or that are available to you. Find specific examples of materials that do an adequate or commendable job of presenting older persons and aging-related issues, or covering topics from a lifespan perspective. Find examples of biases, misinformation, or omissions in materials you or your school use. Based on your review, what general recommendations for improvement would you suggest?

Chapter 2. What Content Should Be Included?

2.1 Which concepts and background information especially interested or surprised you? Explain.

2.2 If you were to single out from the list of concepts in this publication the ten most important ones for students to learn during their K–12 education, which ones would you choose? Why?

2.3 Which concepts might you be able to integrate into your curriculum?

2.4 Think about the demographic characteristics in your community and state. What trends do you see? How might these trends affect you and your students?

Chapter 3. How Should Content on Aging Be Presented?

3.1 (a) Choose three different concepts from Chapter 3 that you could most easily introduce to your students.
(b) For each concept, write specific corresponding learning objectives that would be appropriate for your grade level and subject.
(c) What readings, classroom activities, or teaching method could you use for each objective? (For ideas, see Appendices B and C for General Learning Objectives about Aging and Sample Classroom Activities.)

3.2 Review selected print or on-line resources on an aging-related topic that especially interests you. (See Appendix D, Additional Resources.) How might you use or adapt the resources to develop curriculum or instructional materials for your students?

Chapter Who Is Supporting Education for Longer Life?

4.1 How do the efforts for education about aging over the past two decades compare with what you know about other educational reform movements (e.g., gender, multicultural, or environmental issues)?

4.2 What tools or training would help you most to be able to present a lifespan perspective to teaching?

4.3 What strategies would you suggest that national and state organizations take to promote educational reform nationally?

4.4 How might you be able to promote learning for longer life with your family, in your school and community, and among your professional colleagues?

"This book makes a significant contribution toward 'gerontologizing' society by emphasizing the importance of lifespan education for all ages and times."

Fernando Torres-Gil, Ph.D.
Associate Dean, Academic Affairs
School of Public Affairs
University of California at Los Angeles

"Young people who anticipate wellness in later life have added incentives to practice good health habits. Health educators keep pace with new research and the changing needs of society by promoting learning for longer life."

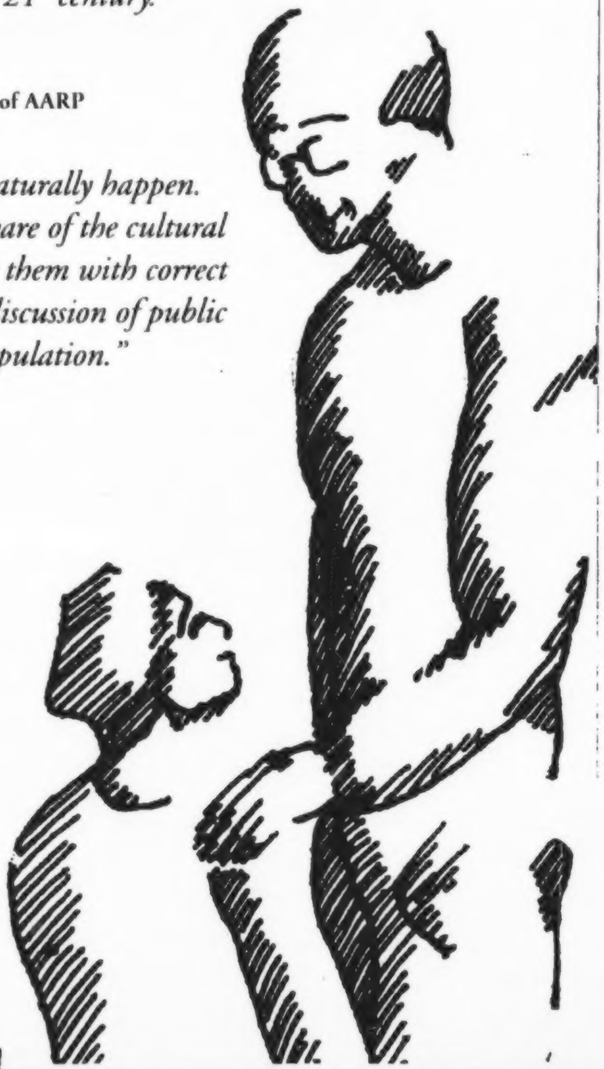
Steve Dorman, Ph.D.
Professor and Chair, Division of Health and Safety
Texas A & M University
Former Board Director, American Alliance for Health Education

"Today's teachers are preparing tomorrow's older adults for healthier, more productive lives. K-12 learning for longer life compliments lifelong learning as two major trends in education for the 21st century."

Annette Norsman, Ph.D.
Director, NRTA Activities, D.C.
National Retired Teachers Association, a division of AARP

"Education about aging doesn't just naturally happen. We must help our students become aware of the cultural stereotypes about older adults, provide them with correct information, and have an informed discussion of public policy issues which affect our aging population."

Rick Theisen, M.A., Past President
National Council for the Social Studies



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